

THE ARCHITECTURAL REVIEW

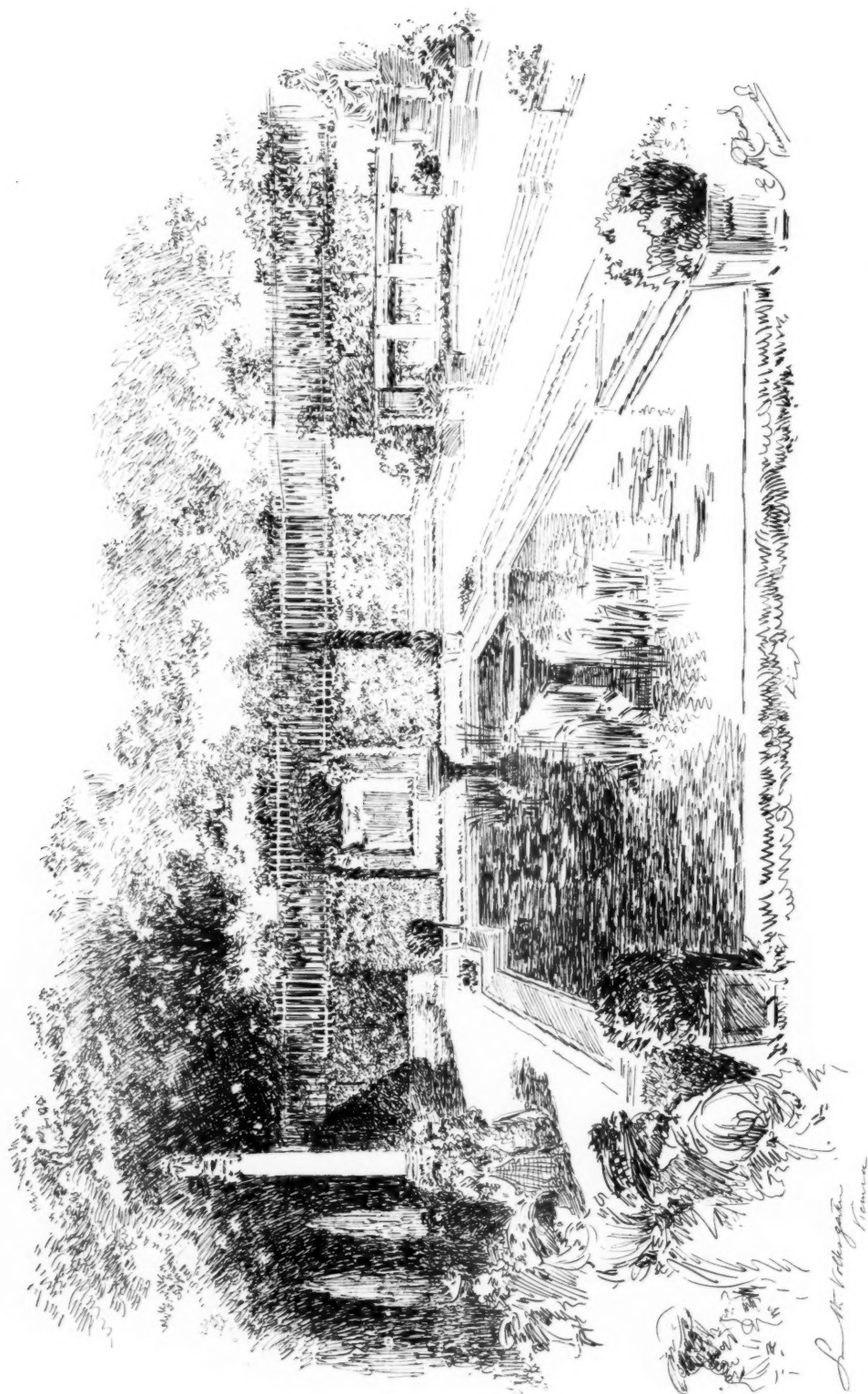
With which is incorporated "Details" . . .

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TERRA-COTTA CARTOUCHE, WITH SEAL
OF THE BOARD OF EDUCATION, AS
PLACED ON NEW YORK SCHOOLS



MEMORIAL TO THE EMPRESS ELIZABETH IN THE VOLKSGARTEN, VIENNA
DRAWN BY A. E. RICKARDS, F.R.I.B.A.

INIGO JONES AND THE THEATRE

BY W. R. LETHABY



AS is well known, Inigo Jones was much occupied in mounting masques, and, I suppose I may say, plays. In the forty years from his first return from Italy to the bankruptcy of the Court of Charles the First, he must have contributed much to the development of the English theatre.

Inigo Jones was only nine years the junior of Shakespeare. Interested as he was in the stage, he must have watched the first production of the plays. From 1604 to 1611 the works of the master-poet were played at Whitehall, almost alternately with the masques of Jones's contriv-

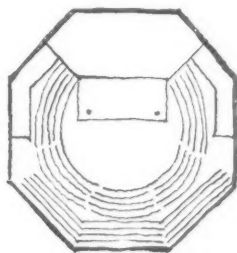


FIG 1.—THE OLD SWAN THEATRE

ing, which were the most advanced things that had been seen in stage-craft. We can hardly doubt that playwright and artist were well known to one another. Jones's work on the masques would not have been in design and direction only. He was a painter, and he must have worked directly on the productions. In a bill of the charges for the Queen's masque at Christmas, 1610, occur the items: "Imprimis to Mr. Inigo Jones as appeareth by his bill £238 16s. 10d. Rewards to Mr. Benjamin Johnson for his invention £40; Mr. Inigo Jones for his pains and invention £40; Mr. Alfonso for making the songs £20; etc., etc."* As Payne Collier says, "for the contrivance of the machinery and for the painting of the scenes themselves, the poets of the day were commonly indebted to Inigo Jones"; and Ben Jonson in a preface to a published masque wrote "the leading part was of Master Inigo Jones' design and act."

In the library of the Royal Institute of British Architects there are two designs, one of which is entitled "Front for the Queen's Masque of Indians," while the other is called "Front for the masque, Inns of Court, 1623." These were for the frames of the scenes. There is also a momentary sketch of an Entry of Diana (Fig. 2), which

may have been for the same masque as the finely drawn scene reproduced by Prof. Blomfield several years ago in the "Portfolio," where Diana is seen in the sky.

In the association of Jones and Jonson there would from the first have been friction which later caused a rupture. In the published masques Jonson measures out his acknowledgments as if by agreement. In 1605 he writes of Jones, "whom I take occasion to remember lest his own worth might accuse me of an ignorant neglect"; and in 1609 he ends with: "It is a virtue planted in good nature, that what respects they wish to obtain fruitfully from others they will give ingenuously themselves."

Chapman was more generous, as is shown by the title of "the Memorable Maske of the Inns of Court performed before the King at Whitehall on the 15th of February 1613; at the nuptials of the Palsgrave, with the manner of their march on horseback from the Master of the Rolls his house, with their showful attendants. Invented and fashioned, with the ground and special structure of the whole work by our Kingdom's most artful and ingenious architect Innigo Jones: Written by G. C." Some sketches for ornamental chariots at the R.I.B.A. may have been prepared for this progress through the streets. At the masque at St. James's, June 1610, "in the first act came the young Duke of York between two great sea slaves, the chiefest of Neptune's servants, attended upon by twelve little ladies all daughters of Earls or Barons . . . and the little ladies performed their dance to the surprise of every person."

Considering the long association of Jones with theatrical productions, it seems that it must be more than accidental that his first objective in the second Italian journey should have been Vicenza, where he studied Palladio's theatre. After going on to Rome and Naples, he again returned to Vicenza nearly a year later.



FIG. 2.—DIANA, FROM A SKETCH BY INIGO JONES

* Proceedings Soc. Antiq., Vol. II, New Series.

INIGO JONES AND THE THEATRE

On the leaf before the title-page of his copy of Palladio (the 1601 edition, which he probably brought back from his first visit to Italy) is a description of Palladio's theatre, headed "Vicenza, Sunday the 23 of Sep. 1613." This is apparently the first note made on the tour, and it suggests much. He brought away drawings of the building, for he noted that it was finished with "stucco full of ornament as the design I have."

Now, amongst the drawings in the Worcester College collection there is a plan of what is obviously a theatre. It has many correspondences with the theatre at Vicenza (Fig. 3), and forms a link between the old open octagons of Bankside and the more modern roofed play-houses of London. It was evidently intended to be roofed, for seating is arranged filling the pit. The whole is ingeniously planned as an octagon within a square, the stage projecting in front of a hemicycle, having five openings; this feature is clearly adapted

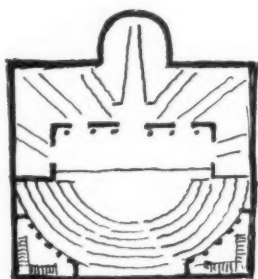


FIG. 3.—PALLADIO'S THEATRE
VICENZA

from the five openings and radiating avenues at Vicenza (Fig. 4). In the British Museum (Lansd. 1171) there is a volume of drawings relating to the mounting of Court masques, which seem to be, as they are said to be, by Inigo Jones. Some of the drawings show complete plans and sections of a stage, and one is the plan of a masque-house that must be the one which Jones erected at Whitehall (Fig. 5). A detailed plan of the stage is entitled "the King's and Queen's Majesties' Masque of 'Salmacida Spolia' in the New Masking House Whitehall 1640."

The building was of T shape, 53 ft. wide at the stage end and 37 ft. at the other, and 85 ft. long—all external measures. In the middle of the stage was a flight of steps and at the centre of the auditorium was the Royal Box. The short seats next to the stage were "music seats"; on the stage is written "passage behind the back cloth."

Another plan in the same collection shows the old Palace Hall (not the Banqueting House) arranged for "a pastoral" of Florimen (?) on St. Thomas's Day 1635. This hall was of the usual type with a screen and passage-way. In the auditorium behind the Royal Seats were "the Countess of Arundel's Box" and "the Lady Marquis her Box."

In the plays at Oxford in 1605 Inigo Jones made use of "turning pillars," as well as painted cloths, and the scene was "changed three times in one tragedy." The turning pillars are an ancient

device; being painted differently on three sides, one third of a revolution exposed a new design.

According to Serlio the designing of scenes by the "rules of perspective" was part of an architect's business.

The scenes were three—the comic, tragic, and satyric. The first represented old houses, shops, an inn, etc.; the tragic

had palaces and statues in the "modern" way; and the satyric was of trees, rocks, and "rustic cabins." Lights of various colours were set on the several parts of the scenes, as the friezes of the houses. These pages of Serlio must have been very familiar to Jones. A design for a scene published by Professor Blomfield in the "Portfolio" with trees and rustic cabins is practically a copy of Serlio's illustration of a satyric scene. The Italian theatre, and through that the modern theatre everywhere, is largely a revival of the Roman. Vitruvius says there were three sorts of scenes, the tragic, the comic, and the satyric, and describes them in nearly the same words as Serlio uses. Palladio's theatre at Vicenza was based on a study of the Roman ruins.

Many of Jones's drawings at Oxford and elsewhere appear to have been prepared as illustrations for a work on architecture. It may be that his plan for a theatre was made for this purpose, or possibly it may have been a suggestion for some actual London playhouse. It is certainly an entirely reasonable and beautiful project. It may be that this and others of the drawings were made by Webb, the assistant and successor of Jones, but in any case the design is almost certainly the master's; the resemblance between it and the theatre at Vicenza is good evidence for this.

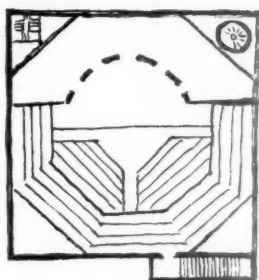


FIG. 4.—DESIGN FOR A
THEATRE
BY INIGO JONES
(In the Worcester College
Collection)

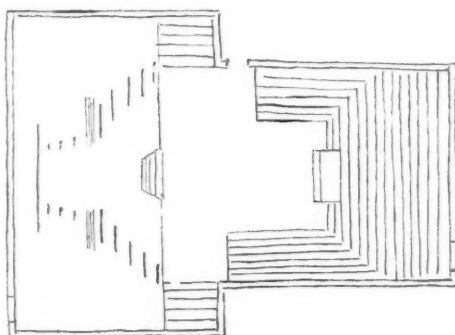


FIG. 5.—DESIGN FOR A MASQUE-HOUSE
BY INIGO JONES

WORKS BEGUN BY INIGO JONES, WITH NOTES ON JOHN WEBB

BY HARRY SIRR, F.R.I.B.A.



JOHN WEBB, with his fine sense of Inigo Jones's skill as an architect, must have brought to mind certain designs of his old master when citing evident monuments of his genius in "The Vindication of Stonehenge Restored."

The Queen's House was but a small portion of the palace at Greenwich, the Banqueting Hall was a mere fraction of the palace of Whitehall. The great portico and the renovations could be pointed to, but an important work of rebuilding, at one time actually prepared for, had long been arrested at Old St. Paul's. The Civil War and Interregnum accounted for stagnation in building, and Jones's death in 1652 was hastened by grief and misfortune, though he had enjoyed a full share of royal patronage in peaceful times. Webb dwelt upon this, and made the reflection that death "prevented him from doing his now sacred Majesty any actual service." Domestic affairs then were more settled, the monarchy having been restored four years.

The knowledge necessary to guide an investigator had not begun to dawn when James I's curiosity concerning the origin of Stonehenge was aroused. Evidently Jones did his best in discharge of a duty laid upon him, and, it would be supposed, presented his conclusions in finished form. Still, on his decease some of his friends, among them the famous Dr. William Harvey and John Selden, encouraged Webb, his sole executor, to compose a treatise from "a few indigested notes." Webb prepared this for press, and in 1655 published "Stonehenge Restored." With whatever degree of pleasure Jones had undertaken the investigation, a royal command was obeyed, not intending "to struggle against any opinion commonly and long since received,—let every man judge as it pleaseth him." There with Jones the matter had ended. Compilation and publication upwards of thirty years afterwards were wholly due to Webb, who wrote: "Had he (Jones) survived to have done it with his own hand, there had needed no apology. Such as it is, I make now yours. Accept it in his name, from J. W." The work was dedicated to Philip, Earl of Pembroke, to whose house at Wilton Jones was summoned, and there received in person the command from James I during the lifetime of the then earl, William, in 1620. Thus an unimportant but curious work, well illustrated, was offered to "The Favourers of Antiquity." The subsequent "Vindication," in 1664, entirely by Webb, is in every sense a stout defence of his master, evincing

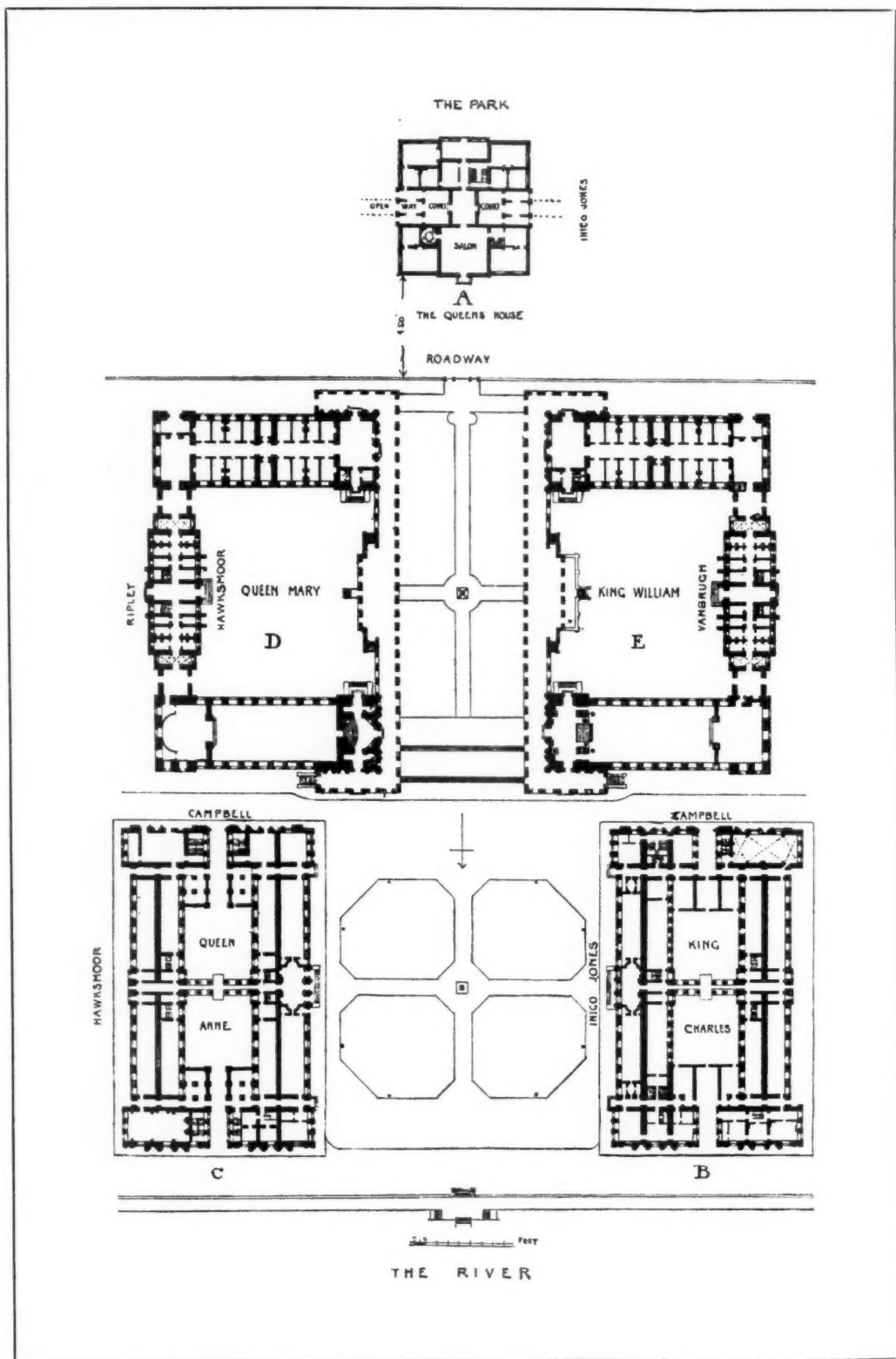
whole-hearted admiration, and embodying valuable particulars of biography.*

The history of the development of the plan for the new Greenwich Palace would be of interest, but no history has ever been written; neither the public records nor the collections of Jones's drawings have any claims to fullness, and it is highly doubtful whether sufficient authentic particulars and a sequence of plans survive.

The disposition of the intended palace was under discussion at the Restoration, when Sir John Denham had the matter in hand. Evelyn considered that it should be built between the river and the Queen's House, so that a large square cut should have let in the Thames like a bay. Sir John was for setting it on piles at the very brink of the water. This proposal Evelyn could not assent to, knowing Denham "to be a better poet than architect, though he had Mr. Webb (Inigo Jones's man) to assist him." Shortly afterwards, in January 1661-2, Evelyn was favoured by His Majesty with his intention of building the palace and quite demolishing the old one. The old palace stood westward of the Queen's House, according to Cunningham, who speaks of the small fragment facing the river, all that was then (1848) standing, containing six pilasters, "with the caricature faces which Gerbier ridiculed in the works of Inigo and Webb."

It is quite possible that Webb had Sir John Denham and even his royal master to reckon with, though it is likely that Charles II had some appreciation of Jones, his father's old servant, and in any case would have preferred to carry out his design. Perhaps it was due to Denham's persistence that the side wings were brought with their ends quite near the river. "According to a plan at Worcester College, the palace was intended to form the three sides of a quadrangle of which the existing building (Queen's House) was to have composed the central block. Some indication of the projected addition may be perceived in the parapet on either side of the house." From this statement in the notice of Jones in "The Dictionary of National Biography" it is apparent that the Queen's House was an integral part of the scheme. It was begun by Jones in 1617 for Anne of Denmark, the queen of James I, for whom Jones is reputed to have done building work earlier when in Copenhagen; the idea of a new palace at Greenwich may have had an early origin

* Jones's theory was that Stonehenge was a Roman temple. Dr. Walter Charleton condemned this in "Chorea Gigantum," 1663, a treatise intended to prove that Stonehenge was made by the Danes. Webb replied in "A Vindication of Stonehenge Restored."



PLAN OF GREENWICH HOSPITAL, AS EXISTING

(From Belcher and Macartney's "Later Renaissance Architecture in England")

under her auspices. Sir John Denham was not a trained architect, and it is clear that he was incapable of developing the design with which Webb naturally was well acquainted. This consideration, coupled with his qualifications, made Webb a very desirable, if not indispensable, associate. He may have been powerless to prevent revision of Jones's general plan and disposition. Certainly he was responsible for the erection of the side of King Charles's block next the great river court, though, it would seem, unofficially until November 1666, when he was duly commissioned assistant to Sir John, solely for erecting and building the palace, with the same power of executing, acting, and proceeding, and of granting warrants for stones to be had from Portland. A salary of £200 per annum and travelling charges, and arrears since January 1663, were authorised to be paid.

The elevations of King Charles's block, excellently handled, conceivably follow a theme from the hand of Jones. "Vitruvius Britannicus" (1717), the first architectural work published in which attribution could be expected, credits Webb with the execution of Jones's design. Mr. Gotch refers to the drawings in an interesting paper on "The Burlington-Devonshire Collection," and is of opinion the design should be attributed to Webb. That Webb made the details is apparent; it is highly probable sketches and small scale-drawings were in existence and before him. If Jones's pioneer drawings cannot be pointed to in support of tradition, a greater difficulty arises in opposing tradition without proofs on behalf of Webb.

Webb was already detailing the interior in 1666, when he was empowered to grant warrants for stone. The authorisation—in a sense, retrospective—might be evidence that other work was immediately contemplated, Webb remaining Assistant-Surveyor till the death of Denham (1669), when Wren came upon the scene. It is practically certain that a chapel was never erected on the east side of the great river court. Webb's plan for this is dated March 1669-70. He was then fifty-eight years of age. Probably the remaining two or three years of his life were spent chiefly in the country, at his seat at Butleigh in Somerset—the retreat from which he had dedicated the "Vindication" in 1664. He devoted his leisure to a lengthy historical essay, published in 1669, entitled "Endeavouring a Probability that the Language of the Empire of China is the Primitive Language."* This was dedicated, in 1668, also from Butleigh, and also to Charles II. Besides, according to report, he translated from the Italian Tarcognota's "History

of the World," which he left in the hands of his son James. He was not treated altogether fairly, for he held the reversion of the post of Surveyor-General, to which Wren was appointed.*

The conversion of Greenwich Palace into a Hospital for Seamen was decided upon in 1694. Mr. Gotch says there was some talk of pulling down King Charles's block, but that Queen Mary (who died that same year) objected on the ground that it had been built by Webb from Jones's design. The block was incorporated in the final plan by Wren, and the progress of new buildings, related by Lysons, may be briefly stated and followed on the plan of the palace as existing. A brick building erected on the west side of King Charles's block was begun in 1696 and nearly completed in 1698. The greater part of Queen Anne's block was built and covered in before 1728; the foundations were begun in 1698. Wren's hall in the King William block was begun in 1698 and completed in 1703; the block was finished in 1726; the colonnades were being built at the same time, and Queen Mary's block was not finished till 1752; the chapel by Ripley was destroyed by the fire of 1779, and the present chapel was built by Stuart. The brick building was cleared away on the west of King Charles's block, and Jones's and Webb's east front was repeated—the north pavilion in 1712 and the south pavilion in 1769. Thus, the whole palace was not completed until one hundred and fifty years after the commencement of the Queen's House by Jones.

No chroniclers have left any records towards a proper understanding of the development of the plans for the immense palace of Whitehall. It has been generally supposed that the Banqueting Hall was an instalment of the large design, on an assumption that there were at least initial drawings of the whole palace prepared before the erection of the Hall was commenced in 1619 for James I. The drawings extant unquestionably convey the impression that a very considerable amount of time was subsequently spent in maturing the large design. Webb was only seventeen years of age when he went to live with Jones on leaving school in 1628.† The Banqueting Hall

* Wren enjoyed completely the Royal favour. Webb, simply Surveyor-Assistant to Denham for Greenwich, had little chance of promotion. So early as 1661 Wren accepted Charles the Second's invitation to act practically as Surveyor-General, nominally to assist Denham. In this responsible position Wren felt it incumbent upon him to prepare the scheme for rebuilding London after the Great Fire. He was then appointed Surveyor-General and Principal Architect for rebuilding the whole city, the Cathedral of St Paul, etc.—a specially created office. On March 6th, 1668-9, he was formally appointed Sole Deputy to Denham as Surveyor-General of the Royal Works, and after Denham's death he succeeded him.

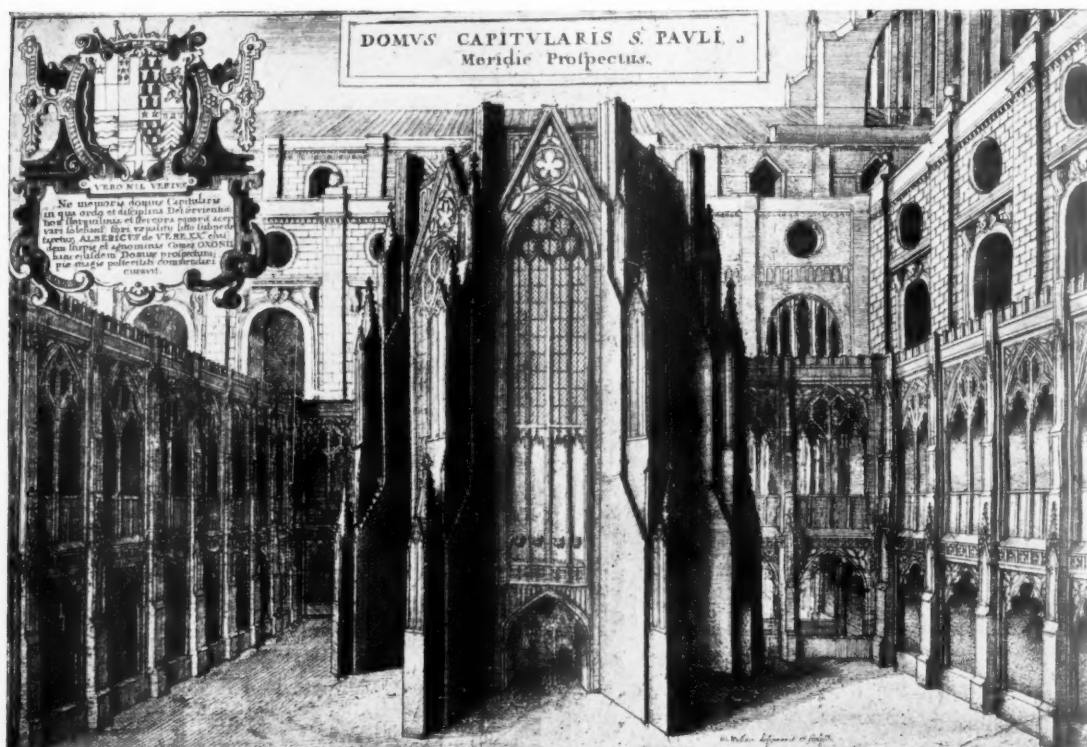
† Cunningham discovered Webb was neither nephew nor son-in-law of Jones. He married a kinswoman of Jones.

* Republished in 1678 under title "The Antiquity of China."

INIGO JONES AND JOHN WEBB

had then been finished six years, but in after years Webb helped with the drawings for the palace. What would be of importance in considering whether the Hall was built before the large design was attempted is not so much the date of drawings made by Webb, and possibly by other hands, as the probability of initial plans and sketches; above all, the deliberate plainness of the end walls as seen in the building and shown on old views of the Banqueting Hall should be convincing evidence that extensions were anticipated. Probably James the First instructed Jones to prepare a plan for a new palace soon after he became Surveyor-General in 1615.

show that a design of some magnitude was in Evelyn's mind. Webb's decease dated eight years before this, yet the plans of Jones could not have been forgotten, and Evelyn may have discussed them with Charles in Webb's lifetime. "It is to be hoped," Evelyn writes (in "The Whole Body of Ancient and Modern Architecture," 1680), "that when His Majesty shall perfect his Royal palace at Whitehall according to the design he will destine some apartments for the ease and encouragement of the ablest workmen in this as in all other useful, princely, and sumptuous arts:—I mean for Printers, Painters, Sculptors, Architects, etc.: in emulation of Francis I,



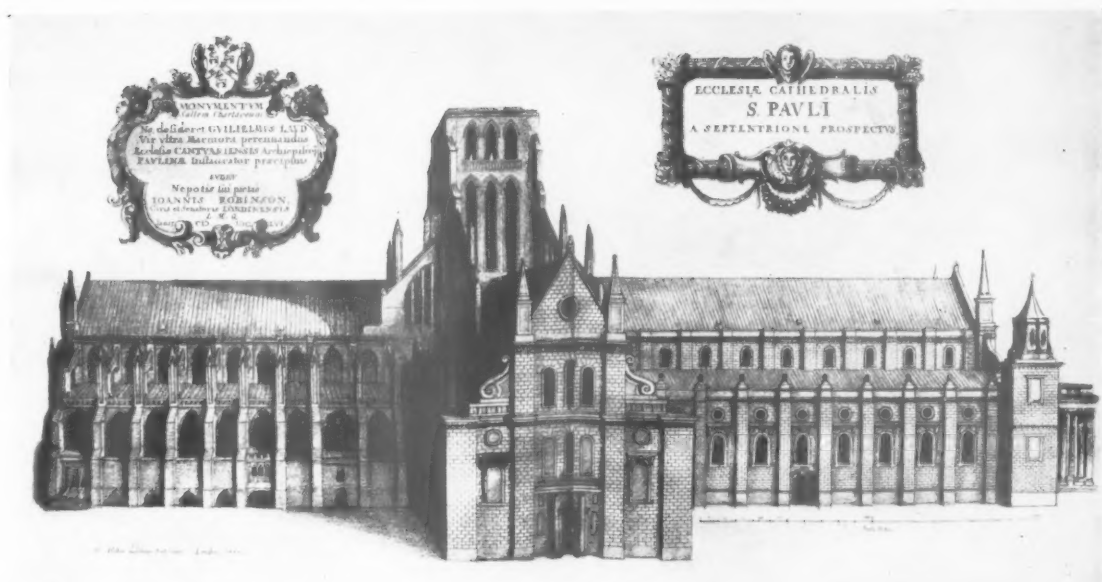
THE CHAPTER-HOUSE OF ST. PAUL'S CATHEDRAL
AS SHOWN IN DUGDALE'S "HISTORY," 1648

Thus a design would have been at hand ready for development when the old Banqueting Hall was destroyed, and it is certain that Jones quickly got to work with the new building. James would soon have discovered the enormous sum of money the complete palace was likely to cost. A reduced design, still upon a grand scale, presented to King Charles the First in 1639, had no better chance of realisation, and the Civil War prevented further steps being taken.

An allusive passage of John Evelyn might imply that Charles the Second contemplated proceeding with the palace, though it had so long hung fire. The difficulty of obtaining money is not touched upon, but the passage is sufficient to

Henry IV, Cosimo di Medices, the Dukes of Urbin, Richlieu, etc." The aspiration was natural enough, and the hint even of a probability of building the palace is, perhaps, unique.

Before leaving important secular buildings, occasion may be taken to remark upon the connection of Webb with Ashburnham House, which is accepted as an authentic work of Jones—one of the most beautiful of his art. It is fitting to observe that the notice of Jones in "The Dictionary of National Biography" is a marvellous example of minute research. A few houses discovered to have been built from Webb's designs had previously been attributed to Jones: those who are familiar with the subject will know that

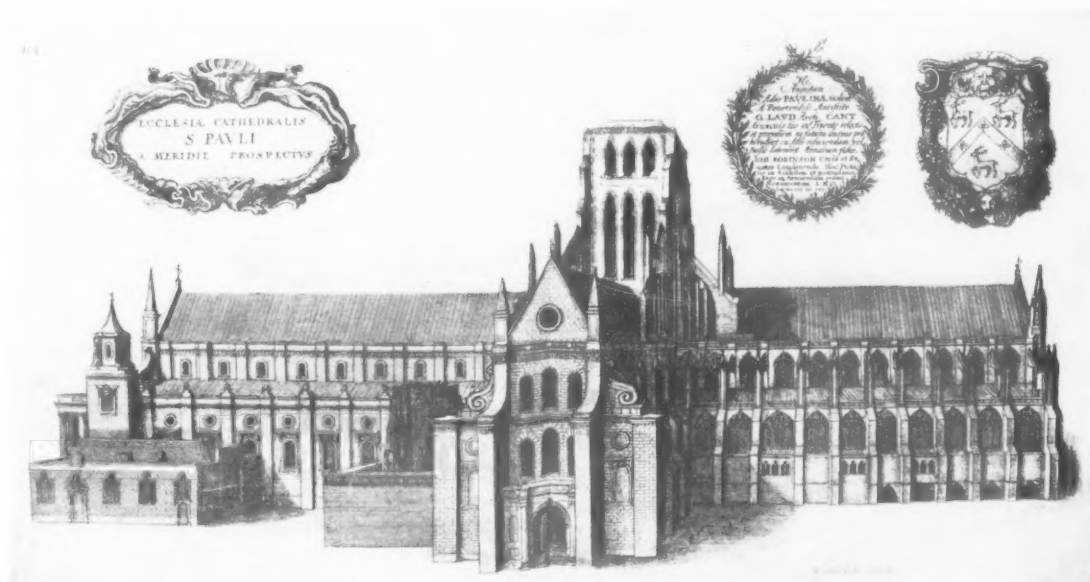


NORTH ELEVATION OF ST. PAUL'S CATHEDRAL
AS SHOWN IN DUGDALE'S "HISTORY," 1648

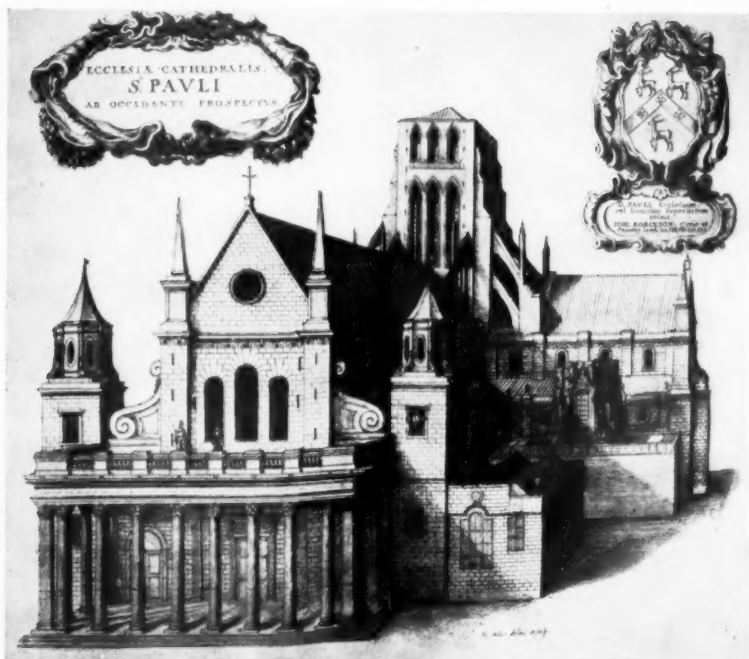
Ashburnham House is not one of these. There is some reason, perhaps, for questioning whether the erection was really begun by Jones—one writer, Batty Langley, heard it reported that the work was carried out by Webb. One tradition only has been handed down concerning the authorship, and there is no reason for doubting that the design was made by Jones. No drawings nor documents have been brought to light, and the date of erection is still unknown.

There is no difficulty in tracing with certainty the nature of work which Jones carried out and contemplated at Old St. Paul's. The cathedral

was in a disgraceful state of decay in the middle of the sixteenth century. Then a fire, in 1561, consumed the whole spire and spread to the timbers of the roofs. These were subsequently renewed; but, though several models were made, the spire was never rebuilt. General neglect continued until at last a commission was appointed, in 1620, by James I, for taking steps to report upon and deal with the structure. Of this commission Jones was a member. As a result, a great deal of stone was collected, but for some reason the prosecution of work was completely neglected. Sir William Dugdale heard it stated



SOUTH ELEVATION OF ST. PAUL'S CATHEDRAL
AS SHOWN IN DUGDALE'S "HISTORY," 1648



WEST FRONT OF ST. PAUL'S CATHEDRAL AS SHOWN IN DUGDALE'S "HISTORY," 1648

that part of the stone collected and lying useless was borrowed for the Water Gate at York House. When Dr. Laud became bishop he procured another commission from King Charles I in 1631. Jones was again a member, and he was appointed architect. Cunningham states that it was the wish of Charles the First and of Dr. Laud that the whole edifice should have been rebuilt by Jones, and that it was not as a front of Old St. Paul's that he designed the west front, but as an instalment of a new building. This is credible enough: no attempt even was made to assimilate the new work with the old, but the Norman flanks were transformed to be in harmony with the new. The great portico was built by the king, and intended to be an ambulatory for the use of persons who previously paraded in the nave and disturbed service in the choir. Indeed, the nave had become a general lounge and meeting-place, and hirings even took place there. The old west front had never been properly completed.

Work was begun in April 1633; houses near the churchyard were pulled down, a great part of the yard was paled in for masons to work in, and an order was given to begin the repair at the south-east end, and to bring it along by the south to the west end. Soon afterwards the bishop laid the first stone; the second stone was laid by a Secretary of State, the third by a judge, and the fourth by Jones. In a few months Dr. Laud was translated to Canterbury. His powerful interest in furthering the work never ceased; for over nine years it was carried on,

and, with the exception of the spire, all was "perfectly finished as to the walls and cover of lead." Hollar's drawings show the whole exterior westwards from and including the transepts renewed—the clearstory only on the east sides of the transepts. Many persons contributed largely to other works. Sir Paul Pindar gave a choir screen with black marble pillars and sculptured figures, choir stalls and wainscot work with cherubims, etc., richly gilded, and costly suits of hangings.

Sir William Dugdale had access to reports and accounts compiled, as it appears by numerous marginal references, by "Joh. Web. gen." Webb was about twenty-two years old when the works were started, and he could have been

of great assistance to Jones, who had little time for clerical work and accountancy.

The west front and portico (well known to have been greatly admired) are in no danger of being forgotten, and the whole of Jones's restoration would have become memorable but for national disturbances and the short remaining life of the old cathedral. Contemporary views alone are slight for the purpose of estimating fully the comeliness of vanished work, and etchings, perhaps, do not quite so well picture regular Classic as they do Gothic architecture. None the less, for the instruction they afford, the views of Hollar have a distinct value. The objection that Classic work was unsuitable for a building devoted to Christian worship may be dismissed. Neither the High Anglican Laud nor the staunch Roman Catholic Jones had misgivings. The old cathedral was very beautiful and full of interest, notwithstanding its ruinous and unsafe condition. The exterior was decayed and crumbling away. In one sense Jones followed predecessors by adopting the style of the day in recasing the walls, and with the ultimate possibility in view. The work, which occupied nine years and occasioned a great outlay, is not without interest, and some attempt to understand the old illustrations is necessary to a correct judgment of the design, not of the west front alone, but of the flanks also, and the treatment of the exterior as a whole. The transformed elevations are disciplined and reposeful with a degree of nobility. The best suggestion of detail is conveyed in the view in which the old Chapter

House appears, which shows the Renaissance south side and transept, with large semi-circular-headed aisle windows, moulded archivolts, and horizontal projecting window-heads with consoles, and cherubs' heads in the position of keystones. The regular ashlar is with sunk joints.

Jones was of great assistance to Laud in ordering the disgracefully neglected interior. Hollar's interiors show the new Gothic choir-screen, the Renaissance stall-work, organ, pavings, etc. Besides, the body of the church and the choir were repaired, and the cathedral was fittingly restored for Divine worship. That was the primary object. Other work remained in urgent need of attention. A great amount of the vaulting, and especially that in the south transept, showed weakness, and was shored. The tower was already scaffolded ready for being wholly taken down, and with stronger piers to be rebuilt with a spire of stone.

Troublous times interrupted progress, and in 1643 the repairs ceased. Shortly afterwards all the good work was undone. In 1645 scaffolds were pulled down for the benefit of soldiers; all

the stalls in the choir were taken away; parts of the pavements were torn up; much timber was sawn in the church, and several pits were dug for the purpose; graves and monuments were desecrated; part of the choir was walled off with common brickwork; the whole roof of the south transept and much other vaulting tumbled down when shores were removed, and portions of vaulting frequently fell afterwards. The building was secularised and shamefully treated, and was often used as stabling for soldiers' horses. The portico was converted into shops with lofts and stairs, the columns hewn and defaced for the timber supports, and the statues were thrown down. Defaced, neglected, and ill-used, the cathedral became a spectacle of ruin.

The Dean and Chapter called in Wren after the Restoration in 1662. He made a thorough examination of the structure; much of it he found unsafe, and confirmed the need for rebuilding the central tower. His design would have altered the plan of the whole crossing, and for that and the nave he adopted Classic.

THE SOLDIER AS A FACTOR IN ROMAN ARCHITECTURE

BY HALSEY RICARDO, F.R.I.B.A.



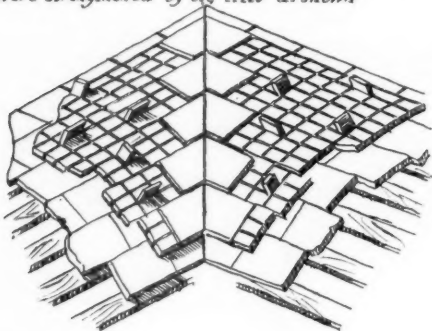
IN the days when one had to make, perforce, transcripts of Cæsar's Commentaries on his Gallic Wars, I remember being impressed by the fact that war in those days had its season (the Franco-Prussian war was then going on regardless of the calendar and the weather), that it was a summer matter, and that when the days grew short both sides agreed to hibernate, and there was to be no resumption of hostilities until the spring should be well under way. Cæsar reports that his campaigns for the year are over, submits an account of his victories, the loss on both sides, the amount of marching done and new country opened up; states that his legions are, at the time of reporting, comfortably housed in winter quarters; and he himself crosses the Alps and hurries down to Rome to answer in person all necessary particulars, and to attend to his own private affairs. We may put, at an easy estimate, the numbers of his soldiers left in Gaul at 50,000, and the question that touched one's fancy was—what did they do with themselves during their enforced respite from fighting? It is clear that they must have been kept pretty actively employed, else they would have got out of hand, and we are not allowed to hear of any mutinies during the Emperor's

absence. The principles of Roman construction supply the answer. The two salient and primary characteristics of Roman building are (a) that it can be done by unskilled labour under skilled direction, and (b) a kind of agonised ingenuity to be quit of the carpenter with his wood scaffoldings and timber centerings. This independence of the carpenter was brought home to the builder in a very matter-of-fact way. In the queue of requisitioners for timber he came a long way down, and his requirements could only be satisfied after the more importunate and indispensable demands had been satisfied.

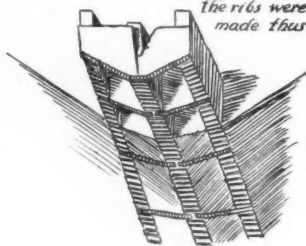
In camp, wood was wanted for stockades, for repairing the pents, cages, and shelters for the miners, for the construction of movable turrets, for bridges to cross the river now and on march, for the catapults and battering-rams, for the armourer's forges, for the tile-maker and lime-burner. But the largest demand of all was for fuel, for cooking and for heating the buildings within the walls. We, who are accustomed to coal, are apt to forget how much more wood is required to produce a given amount of heat. And then, to add to his other handicaps, the builder required his timber squared or in planks, and there would probably be incessant grievances and insupportable delays owing to the carpenters having difficulties with their sawyers.

THE ROMAN SOLDIER AND ROMAN ARCHITECTURE

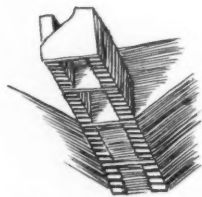
Where the vaults intersected and the system of tiles laid flat on open centering was used, the groins were strengthened by big tiles as shown



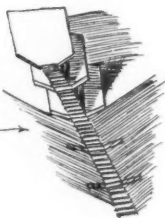
Where the face of the vaults was not tile-plated, and permanent brick and tile centering was used the ribs were made thus



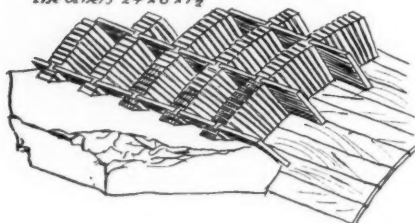
Where the vaults were smaller, or intermediate ribs were required, they were made like this



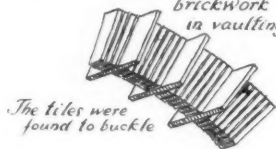
or like this



The square bricks measure 24x24" the others 24x6x1 1/2"



An early method of reducing the quantity of brickwork in vaulting



The tiles were found to buckle

(From "L'Art de Bâtir chez les Romains," by Auguste Choisy)

In cantonments, then, building was done by the soldier, with forced labour from the captives, and possibly also from impressed natives. It had to be done by men who were mainly stupid, largely unwilling, and to some degree malicious. These disabilities were kept in check and mastered by the superintendence of the officers and higher ranks of the soldiery, who plotted out the work to be done and supervised its execution. And the standard so set by the Roman army became the standard of construction at home as well as in the provinces, in the capital as well as in the military headquarters. Retired captains and soldiers built their houses and farm-sheds, made their roads, after the methods they had used when in service. Others gravitating to Rome were ready to act as foremen and clerks of the works: they were accustomed to dealing with slaves, prisoners, and deserters, and knew how to get the maximum of work out of man, willing or unwilling. Moreover, they had been trained in a school where decision and promptitude were vital elements. In the face of the enemy, if the carpenter's work is not forthcoming some substitute must be found on the spot; imminent destruction is a desperate quickener of

ingenuity. Besides, the life of the soldiery depended on the soundness of the design and thoroughness of the workmanship; no scamping could be tolerated; the sergeant's eyes had to be everywhere, keen as a hawk's, and his talons as rapid. One can fancy his sense of experience—and expansion—when put in command of a big job in Rome, with all the appliances procurable in the city at his command, and with all his habits of nervous impatience still ingrain; building material of the very best, cement incomparable, water without stint.

Previous monumental architecture, the architecture of Greece and Egypt at least, had been mason's architecture, carried to the length of being virtually sculptor's architecture. The blocks of marble that sustain a Greek temple are worked with a sculptor's finesse and accuracy and fitted with such delicacy that mortar counted as a mere film of easement, scarcely as a ligature. It was the product of the supreme of

skilled labour. No Greek soldier had a hand in such work, nor had he been schooled in the enforced leisure of the Roman.

The expansion of Rome under the emperors was going on at a terrific rate, and, except in the matter of some exceptional temples, it would be idle to attempt to build sculpturally in stone, although Rome was swarming with Greek craftsmen from Alexandria and Asia Minor as well as from Hellas itself. Great spaces had to be covered, vaster than had ever been attempted before, and the disbanded Roman centurion was quite ready to attempt any project, undismayed by the proposed dimensions. Concrete was his material. Concrete was what he knew and what he could entrust his labourers with, and with concrete the vault was the simplest mode of covering in large areas. The centering was the trouble. Choisy's diagrams are eloquent of the poor man's endeavours to make the best of insufficiency. He couldn't keep his men idle whilst the carpenters attempted to strengthen their work: he must do it as best he can with the bricks or tiles and concrete at his disposal. His business was to fortify his centering with an arched ring of brick-

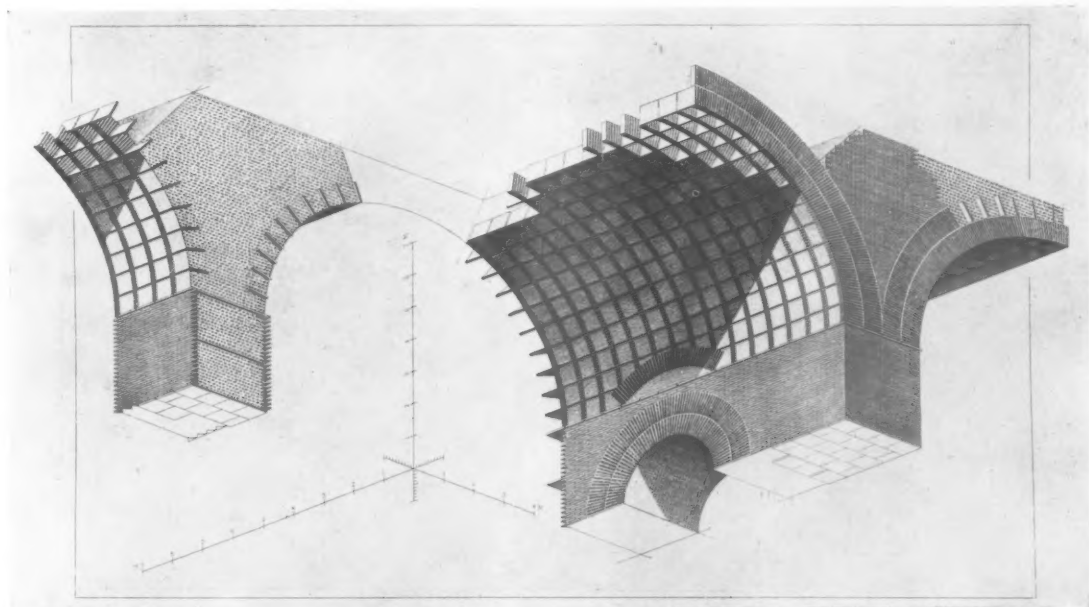
THE ROMAN SOLDIER AND ROMAN ARCHITECTURE

work or by plating it with tiles; but the centres were not strong enough to carry this additional weight without deformation. He had, therefore, before closing up the arch or putting the top courses of tiles on its summit, to substantiate its haunches so as to counteract any tendency of the arch to bulge there; while, on the other hand, he must choose the proper moment to complete his brick or tile work before the pressure on the haunches squeezed the arch out of the semicircle into a parabolic or hyperbolic shape. Once the ring was closed in, or the plating completed, the work could go on mechanically and the centering moved on to the next bay, as soon as the concrete interstices had set sufficiently. And the pressure of these interstices he lessened in a variety of most ingenious ways—one by making coffers in the vault; these coffers being really in the nature of flat domes or saucers, and the difference of material thus saved primarily lightening the weight of the vault itself, besides saving something in the matter of time, labour, and material. You can detect the overseer's eye everywhere, always on the look-out to use right material, to make any saving, however small, to do exactly what is wanted without the least consideration of appearances. His duty was to make his building of the formulated dimensions: it was to be sound, convenient, thoroughly considered in its provision for flues, waste pipes, water supply, etc.: and it was to be done, so appearances seem to indicate, against time, with no unnecessary refinement of workmanship. That was the job he guaranteed. Then came the decorator with his marble, his stucco, gilding, and mosaic.

There had, of course, all through been a working arrangement between them; he was to leave his offsets, his stone templates and so forth (much as the bricklayer provides his concrete blocks and wood grounds for the joiner), and the decorator proceeded to mask every bit of the concrete construction with his appliqué ornamentation. The decorator, I am inclined to surmise, was a Greek, without a conscience. His part was to apply the architectural upholstery as far as the funds would permit; and as these seem to have been generally very lavish the ornamentation was laid on regardless of taste or reticence, exemplifying and characterising the unintelligent sumptuousness of the donors of these indiscriminated decorations. Meanwhile the soldier foreman, we may suppose, was told off to superintend the erection of the last new aqueduct into Rome or the hydraulic engineering going on at Tivoli or on the Alban Hills. I picture Pliny with a Rhine veteran to look after his roads, his fountains and his basins; and one may suppose that in cold weather the latter would have much to say upon the severity of the winter in Central Germany, and the precautions the army had to adopt there to weather it.

We may take the moral of this kind of construction to ourselves, for we are somewhat in the same position. We, too, have unlimited stores of unskilled labour, though ours is in the more compact form of the machine.

The Roman centurion and master-builder could draw upon the artisans, the soldiers, the slaves, and the prisoners, to take part in the raising of



THE CONSTRUCTION OF THE ROMAN ARCH

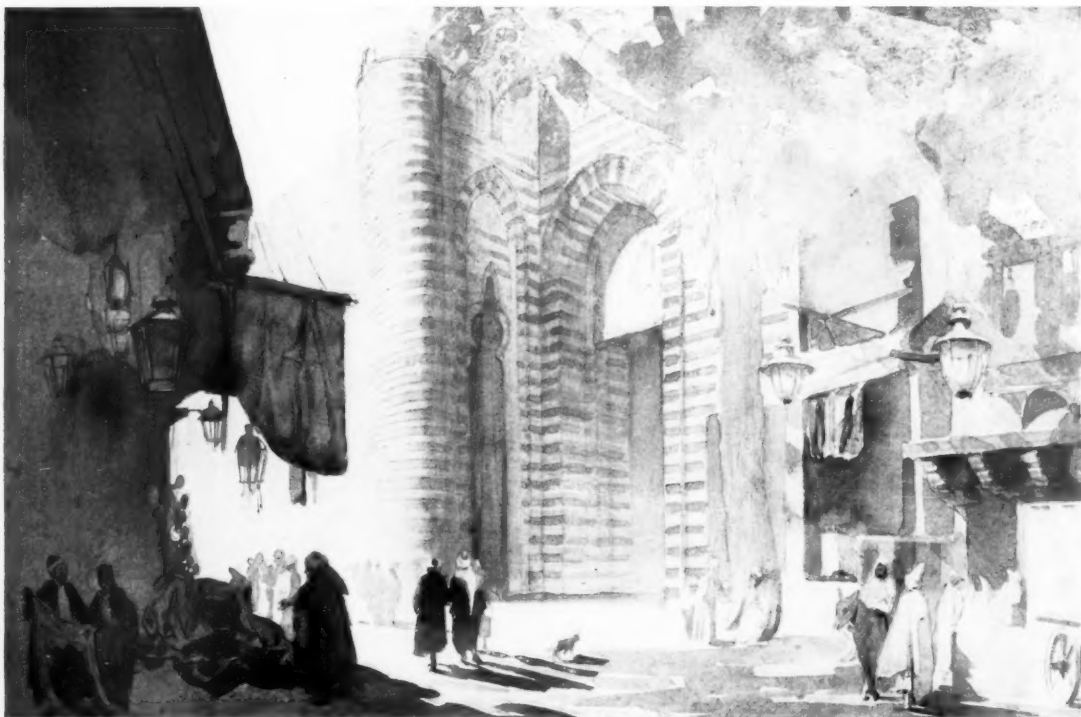
(From "*L'Art de Bâtir chez les Romains*," by Auguste Choisy)

THE ROMAN SOLDIER AND ROMAN ARCHITECTURE

these stupendous walls, piers, and vaults: a few skilled men were needed to supervise the digging of the pozzolana; to turn out the necessary large and small tiles, that played their various functions in the construction of these masses; to see that the army of hodmen deposited the stones, sherds, and brickbats evenly on the beds of cement mortar, that the mixers of this mortar tempered it with the proper quantity of water, and that the second army of hodmen carried this on to the building and properly grouted it in to the first army's deposit of stones. The thousands who composed these armies had only to do what they were told; the work was purely mechanical. We achieve the same result by machinery. The mortar-mill and concrete-mixer, the steam-crane and pulso-meter, are merely condensed forms of human energy; with this advantage, however, that each engine acts, so to speak, unanimously, and therefore the more economically. Nor have we the same need to minimise the use of temporary timbers in our construction that the Romans had to practise.

With the circular saw driven by steam we can slice up a bulk of wood as easily as we slice a carrot, and almost as quickly. But we are not, for that reason, justified in wasting it. I could not but reflect, when they were building the Roman Catholic cathedral at Westminster—and one walked in a forest of mighty timbers, tall, massive,

elaborately trussed and strutted, with boarded centerings to carry the tons of concrete doming that were to come—that we were but a dull folk compared to the citizen of Imperial Rome. The forest of timbers was picturesque, impressive in its quantity and solidity, and a discredit to us as mechanics. What was wanted was a slight steel hencoop erected in place at the springing level of the domes, to be ultimately embedded in the concrete shell. To spend thousands of pounds on a timber underpinning to the cathedral roof was unadventurous and also unintelligent. Such a constructor would have been crucified by Cæsar, before he had got half-way through an explanation of his proposals, as a monstrous incompetent; and the army would be shyer than ever over its indents to the general for its wood supplies. It looks as though the spur of war were needed to develop our faculties imaginatively. The push of commerce does much, our railways and merchant ships have a dramatic force about them, but in romance and daring they are not to be compared with our guns and our men-of-war, our submarines, and the delicately beautiful machinery of warfare. Probably the best movement that has been started during the last two or three generations is the boy-scouts' organisation. A man's shadow ought to be more akin to Death than to the Policeman if the Man himself is to walk heroically.



CAIRO: GATE OF THE MUTAWELLY, OR BAB ZUWEYLA
DRAWN BY A. C. CONRADE

JERUSALEM DOORWAYS

BY WILLIAM HARVEY



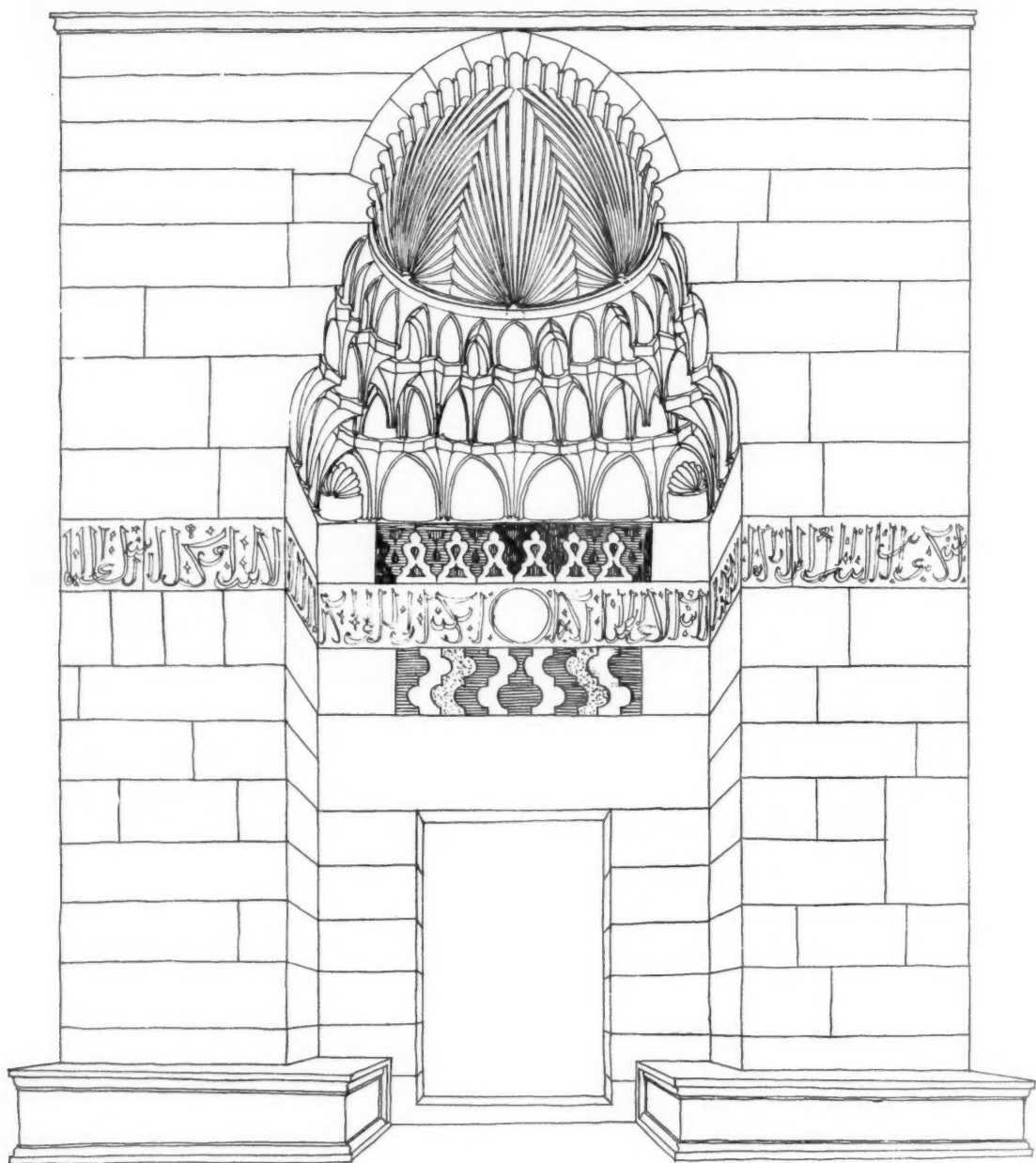
FOR protection and privacy an Oriental house is built around an internal courtyard with few windows opening on to the street to break the bare expanse of the outer enclosing walls. As a consequence of this system of planning the architectural detail applied to the exterior of a house is usually concentrated about the main entrance door, which forms practically the only outward expression of the character and dignity of the place. Generally the door itself is of comparatively small dimensions, but is made important by being enclosed and surrounded by a recessed niche of much more ample proportions, the top of the niche sometimes rising to the whole height of the wall or even projecting slightly above it, with very majestic effect. The typical door recess is rectangular in plan at ground level, and is finished at the top with a semidome supported on pendentives of the type known as "stalactite work." There is, however, a great diversity of treatment and detail, some recesses being roofed over with a single-pointed horseshoe or a trefoil arch. Doors to important public buildings are set back in deeper recesses than those of ordinary dwelling-houses, and this difference of proportion below leads to an infinite number of different arrangements of the stalactite brackets above to support the semidomes, varying from considerably more than a hemisphere over a deep recess to a mere dished-in surface where the recess is shallow. The more important doorways are provided with seats to right and left of the door opening, and with a number of features that recur in a great many examples. These familiar details are carved corbels under the lintels, ornamental relieving arches with voussoirs cut to a pattern so that they interlace with one another and form a counterchanged pattern of different colours, bands of inlaid ornament or of Arabic inscriptions, three or four courses of stalactite brackets, and a niche-head beautifully fluted or treated with stones of red and black to show off its curve. The whole composition is frequently enclosed in a frame of moulding with masonry in alternate red and cream limestone inside, the remainder of the wall being left plain. In the strong sunlight of Palestine the effect of these imposing entrances is extremely satisfactory, though whether a facsimile of the best of them set up in London would be so is quite another matter. Designed to meet Oriental conditions they look best beneath the fiery blue of the summer sky. Reflected light from the side walls of the recess and in the curved niche graduates and modifies the deep shadows to a soft, rich amber

light, through which the details of carved stone can be seen far more clearly than in the blaze upon the external wall, where anything in the nature of delicate moulding or low relief is lost in a blinding sparkle from every exposed edge. In such circumstances the use of coloured masonry is perfectly legitimate and satisfactory, and gives interest to a broad plane of masonry without destroying its air of repose. A water-colour drawing by Carl Haag in the Victoria and Albert Museum conveys a faithful impression of the effect of shadow and reflected light and the dark and light stonework of the Bab-el-Kattanin (Gate of the Cotton Merchants) at Jerusalem. The sky has been painted unnaturally dark for pictorial effect, but the architectural composition is rendered with great skill and an evident intention to embody the actual effect of the structure. The picture is the more interesting because photography fails utterly to reproduce the luminous effect of warm Oriental shadows.

One of the finest niche-headed doorways in Jerusalem is that of the Mehkemeh or Court of Justice, supposed to have been built in 1483. The depth of the recess is rather more than half its width, the pointed semidome at the top being semi-circular on plan with the width of the archivault of the face arch in addition. The soffit of the



DETAIL OF ENTRANCE TO THE COURT OF JUSTICE, JERUSALEM



ENTRANCE TO THE COVRT OF JUSTICE BY THE BAB-ES-SILSELEH (GATE OF THE CHAIN) TO THE TEMPLE AREA JERUSALEM

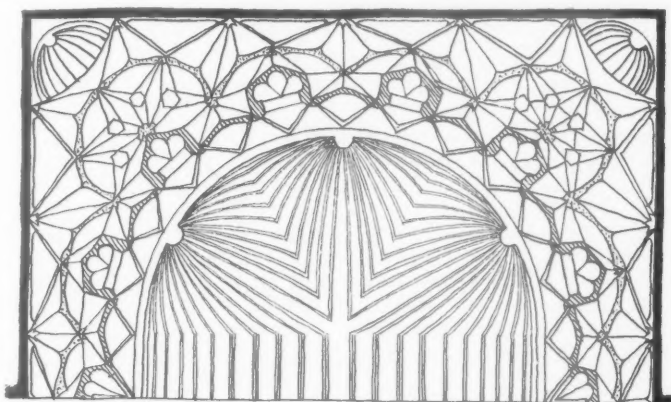
DRAWN BY WILLIAM HARVEY

JERUSALEM DOORWAYS

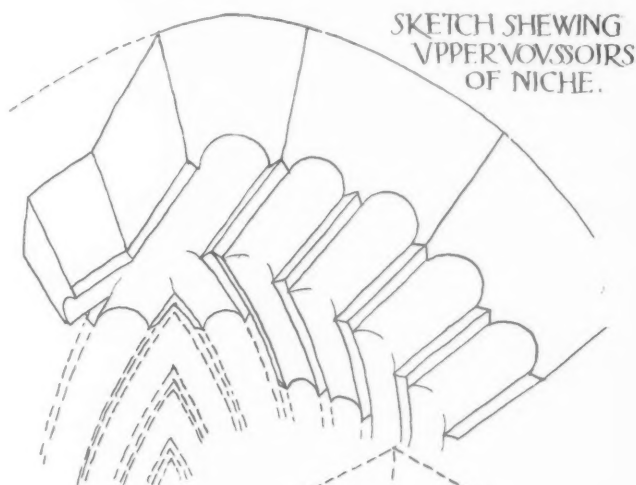
arch is ornamented with twenty-five flutes, which are carried over the domical surface behind to form beautiful fanlike ornaments rising from three points on the base of the niche. The carving of the flutes is so delicate as to necessitate very fine joints between the voussoirs, and these have been most carefully set out to avoid joints cutting across the fine arrises of the flutes except at right angles. The keystone is shaped so as to contain the beginnings of three long channels descending to the three fan-centres already mentioned at the base of the niche. The semidome is supported upon a series of seven shallow niches and eight deep-fluted niches corbelled out upon seven projecting brackets in the course below. The shallow niches come vertically above the brackets, and the deep-fluted ones stand over the spaces between them. The second course of brackets and niches is more complex than the uppermost, and is arranged so as to alter the plan from the circle above to the rectangle below. To occupy the increased space at the angles, a pendant with a little cavern hollowed out behind it is used instead of a bracket. The outward side of the pendant takes its place in relation to the niches of the top course, while the base of the domelike cavern rests upon the brackets of the lowest course. These last are cunningly arranged with different degrees of projection, and with their axes at different angles to the walls to complete the adaptation of the circle to the square, begun in the course above. In each corner of the lowest course is a little niche carved with a shell ornament to give interest to the re-entering angles. A view into the corner of the recess along a diagonal would show a symmetrical arrangement of niches and brackets with the little shell-niche at the bottom, then the "cavern" with its pendant in front, and above that a trefoil-fluted niche in the top course. The ornament of the semidome has not been made to coincide with this diagonal line, but with the centre of one of the shallow niches of the top course. The composition, however, is quite satisfactory, and does not seem to require a closer connection. The combined use of geometry and "free-hand" in the setting out of the stalactite work is highly characteristic of Oriental art. Regularity and pre-

cision were employed just so long as they were productive of a dignified effect, but dispensed with without compunction if a more elastic method were likely to assist more readily to the same end.

A doorway to an old palace in the Tarik-bab-es-Silseleh (or street of the Gate of the Chain) has several features in common with that just described, although both smaller in scale and having a shallower recess. The change of plan from circle to square is here begun in the topmost course of stalactites, the upright flutes of the semidome itself taking the place of the top row of niches in the other example. Three pendants and "caverns"

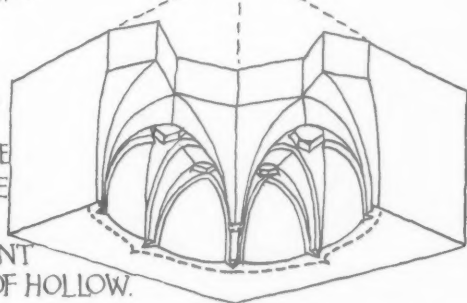


PLAN OF NICHE HEAD TO THE DOOR OF THE COURT-HOUSE NEAR THE BAB-ES-SILSELEH, JERUSALEM.

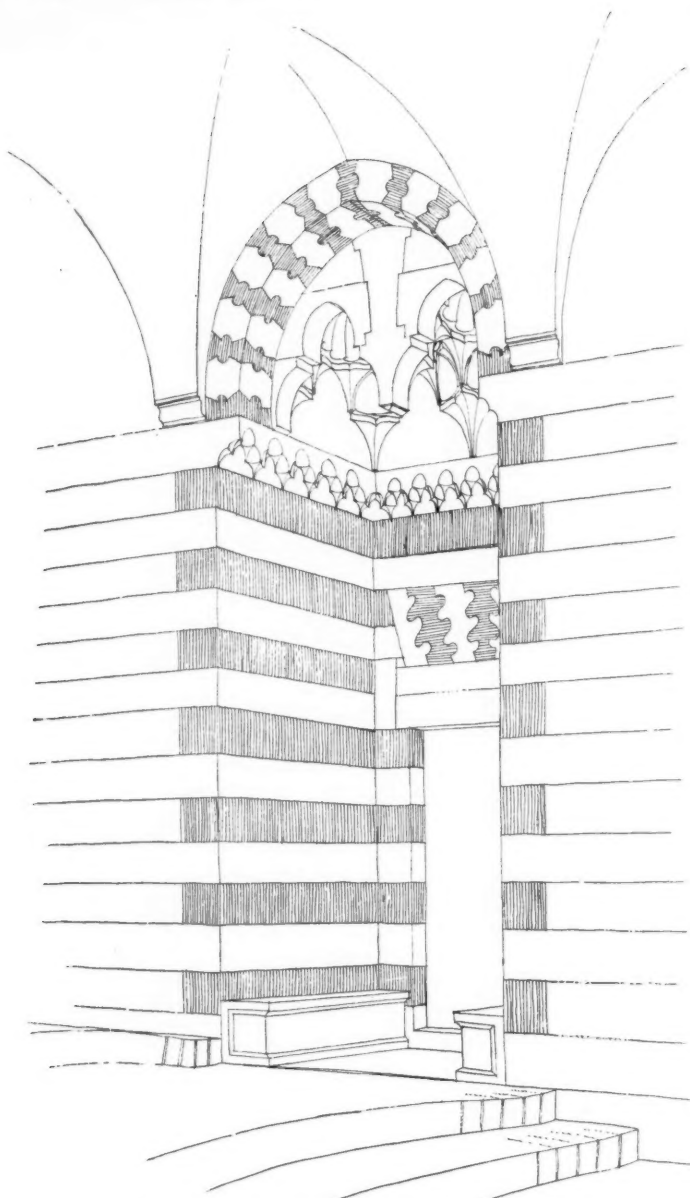


SKETCH SHEWING UPPER VOUSSOIRS OF NICHE.

STONE FROM CORNER OF SECOND COURSE OF PENDENTIVE CARVED WITH PENDANT IN CENTRE OF HOLLOW.



JERUSALEM DOORWAYS



DOORWAY TO A HOUSE NEAR THE NORTH SIDE
OF THE HARAM-ES-SHEREEF JERUSALEM

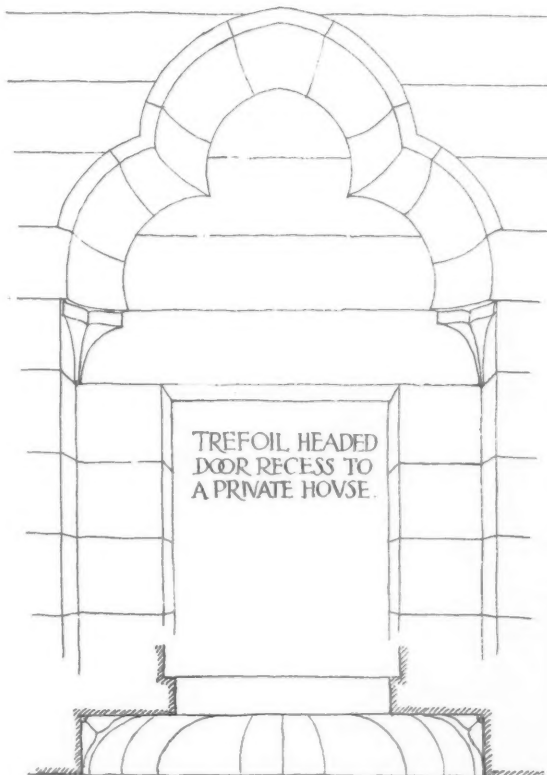
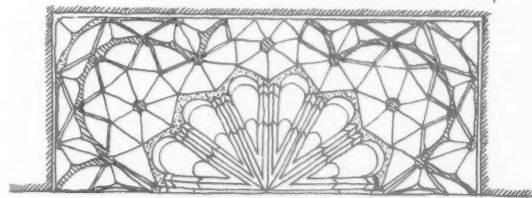
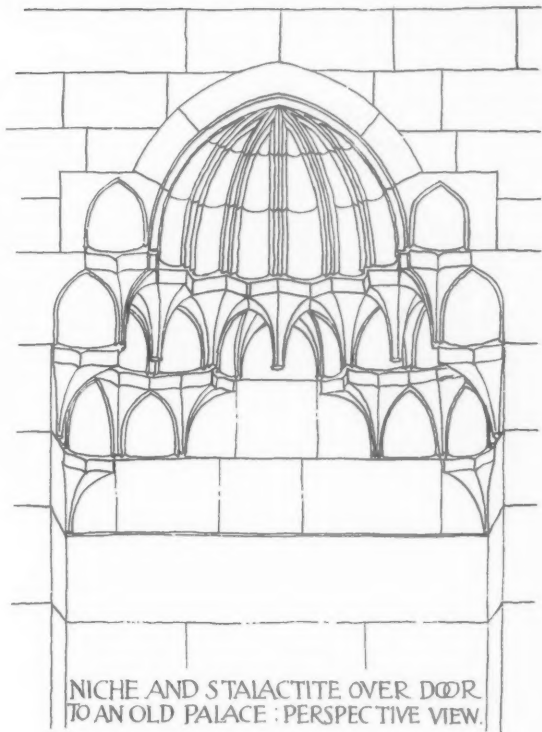
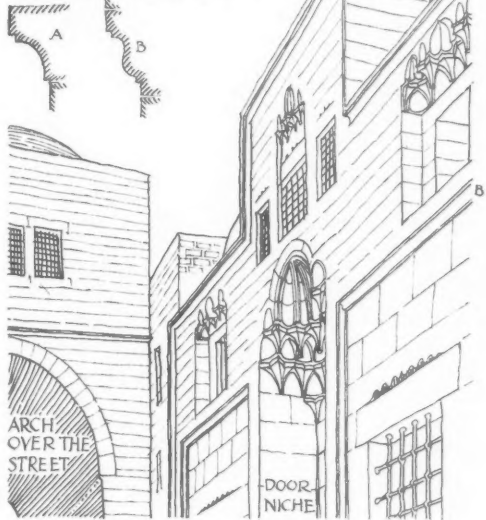
and four brackets shaped like the pendants complete the top course, each flute of the semidome rising from between a bracket and a pendant. The second course down resembles the lowest course of the Mehekemeh pendentive, except that the niches in the corners are plain and shallow and have brackets under them in the course below. The walls of the recess do not seem to have been originally ornamented with the usual inlays, but are now daubed over with whitewash and crude frescoes. The doors are protected with bronze studs of two sorts—lozenge-shaped studs arranged to form a diaper pattern of small hexagons (the long axis of the lozenge acting as common side

to two of these figures), with round studs of greater projection placed one in the centre of each hexagon.

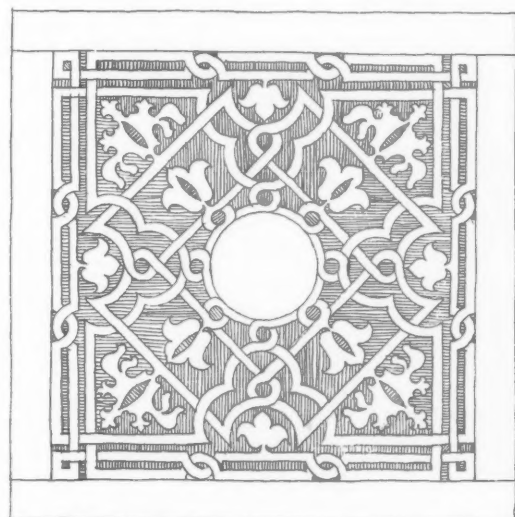
In the covered-in lane leading to the Bab-el-'Atem on the north side of the Haram-es-Shereef is a door recess of rather exceptional kind, the upper part containing two small domes instead of the usual semidome. A large masonry pendant in front supports the division between the domes and forms part of the pendentives common to the two. In this case the plan is purely geometrical; the brackets and niches of the pendentives are adjusted to an octagonal form below each little eight-fluted dome. The contour of the trefoil arches is repeated in the lines of intersection of the pendentives and the wall surfaces. The whole composition is of a very dainty and pleasing order, each part harmonising with its surroundings in a way that is evidence of much thought and care. Below the springing of the face arch a projecting course ornamented on its underside with little brackets and niches is carried round the three sides of the recess. Red and cream masonry and arch-stones, interwoven both on face and on the soffit, give an additional charm to this quaint portal, and though it is smaller than either of the two before described it records the facility with which Saracenic architects could adapt one type of stalactite bracket and niche to widely differing plans.

Some private houses are provided with doors only slightly recessed and covered with trefoil arches with the archivaults carved with one large cavetto. Little brackets at the springing adjust the cavetto of the lowest voussoirs to the square corners of the recess with very graceful effect. Three fine doorways in the street to the north of the present Serai show how varied effects are obtained by means of recesses roofed over in different ways. The central door of the three is a rather more complex example of the same general type as the door recess to the Mehekemeh, having four courses of stalactite work instead of three. It is not, however, so strikingly composed, and lacks the fine fluted ornaments in the semidome. It possesses instead a fine panel of inlaid marble on the back wall and a delicate band of counterchanged inlaid ornament around the lower part of the

SKETCH SHEWING DOOR RECESS & NICHE AS CENTRAL FEATURE OF FACADE
OLD PALACE IN THE
TARIK-BAB-ES-SILSELEH



SKETCH PLAN: RECESSED PART ABOUT 1ST BACK.



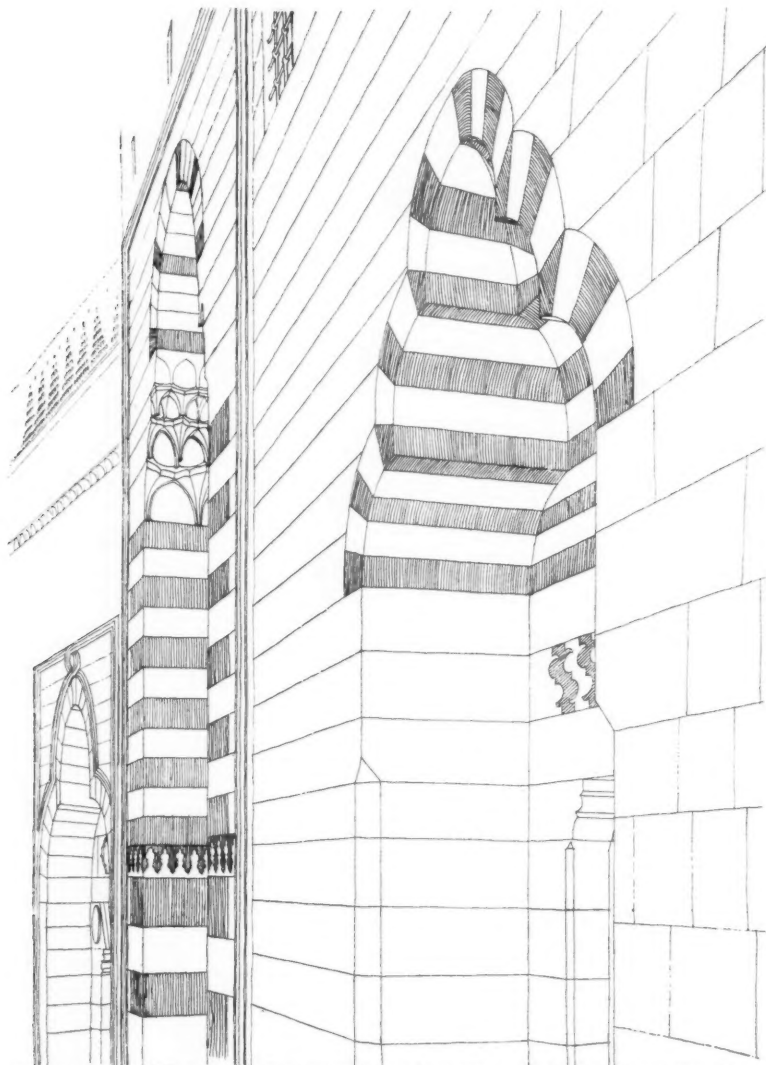
INLAID WALL DECORATION: NORTH DOOR OF SERAI.

DRAWN BY WILLIAM HARVEY

JERUSALEM DOORWAYS

recess. The doorway to the left (east) is covered by a trefoil arch with a plain soffit; that to the west by a high triangular niche with two cusplike undulations. The rectangular plan of the recess is adhered to in the niche-head, with bands of dark and light stone emphasising the arrangement. The most curious detail is the apparent careless-

Examples of this kind are so often quoted to prove Saracenic architecture to be merely fantastic and unconstructional that it is proper to point out that this niche-head is an exceptional and by no means a typical piece of work. Ordinarily, the chief characteristic of these Jerusalem doorways is sound construction adorned with detail inspired



DOORWAYS IN THE STREET TO THE NORTH OF THE SERAI, JERUSALEM. THE GROUNDFALLS FROM RIGHT TO LEFT (TOWARDS THE EAST). FACADE BENDS BETWEEN THE 2ND & 3RD DOORS.

ness in supporting the cusps, which are probably tied into the main mass of the wall either with metal cramps or with corbels arranged so as not to show on the surface. The weight of the superincumbent masonry of the wall is obviously carried by corbelling out, so that the problem of the support of the comparatively slight lining of the niche-head is not a matter of any great difficulty.

by the needs of the structure. Each composition is made doubly interesting by features designed to express the characteristics of the masoncraft to which the building owes its existence, and although neither figure-sculpture nor painting lends any aid, each detail is at once appropriate and, in the strictest sense of the word, architectural.

ROCK GARDENS

BY WYNDHURST FITZHERBERT



ROCK gardens, when tastefully laid out and fashioned with a due regard to the requirements of the plants that will occupy them, are capable of affording the greatest delight and interest. In many cases, indeed, the owners take their entire management into their own hands, and the planting, rearrangement, and additions to their treasures become one of their chief pleasures. That this should be so is not to be wondered at, for the rock garden is rarely of great extent, the plants growing on the ledges are close to the level of the eye, the only necessary tool is the easily-handled trowel, and the gritty soil does not unduly soil the fingers. There are numbers of fine rock gardens in this country the owners of which have an intimate knowledge of and love for every plant in the collection, and are thoroughly experienced in every detail of their culture, and such gardens are of the greatest interest to flower lovers; but, unfortunately, there are hundreds of so-called rockeries that are a disgrace to any garden. Many of these give the impression that a cart-load of stones, clinkers, or broken bricks has been shot out on a rough heap of soil, and on such an accumulation of material it is impossible for any but the very hardiest of rock plants to exist. Another instance of defective construction too often met with is where a steep bank is formed into triangles by upright tiles or flat stones being driven into the earth, each couple enclosing a pocket of soil. This is almost as bad as the heap of clinkers and is quite as inartistic, while in scorching summers the earth between the stones becomes so dust-dry that none but the most robust plants can possibly exist.

The position of the rock garden requires a certain amount of careful consideration. No formality should be apparent in its surroundings, and it should always be situated in an open position. Every endeavour should be made to fashion its environment in a natural style and free from apparent artificiality. No houses or walls should be visible from the ideal rock garden; but in numerous cases, where the extent of ground is contracted, this is impossible, and it is more satisfactory for the lover of alpine to have his rock garden immediately beneath the walls of his house than to give it up entirely. The ground in the neighbourhood of the rock garden should be laid out as picturesquely as possible, and should display a pleasing informality arising from the naturalisation of beautiful flowering shrubs and handsome herbaceous plants, but the regulation flower-beds

and stiff straight walks should never be permitted to exist within its precincts. Trees in the vicinity are a mistake, as, if they are near at hand, they will cast their shade on the garden, which should enjoy the fullest sunlight, for alpine flowers are invariably found on treeless spaces where the sun has full power, and trees will also detract from the fertility of the garden by robbing the soil with their roots. A group of Scotch firs at a little distance will, however, have an artistic effect, since, apart from their natural beauty, they are trees of the mountain heights, and their inclusion in the picture will be an appropriate accessory to the alpine garden.

Many rock gardens are appropriately so named, for they contain far more rocks than plants. This is, unfortunately, a too common fault, and the more pretentious is the composition the greater the probability is of this occurring. What must never be lost sight of is that the garden is to be a garden of flowers and not of rocks, and therefore any undue preponderance of the latter should be most strictly abstained from; in many cases otherwise well-planned rock gardens have been marred by the great preponderance of stone over plants which they show, and where this happens the flowers are necessarily relegated to a subordinate position, since the rockwork naturally assumes the primary place in the picture. Rock gardens should not be disfigured by an excess of broken-up rockwork, for this imparts a mean and unrestful appearance that is out of keeping with the unrestrained freedom of flowering plants. Rock gardens should not be constructed in too formal a manner. Stones of a similar size should not be too freely used, nor should they be placed at exactly equal distances from each other. Large rounded rocks with uneven or pointed outlines should never rest on flat surfaces of stone. Rocks should not be arranged at different angles, but should be so placed as to suggest natural stratification as shown in outcrops of the living rock, for the nearer Nature can be copied the more artistic and desirable will be the general effect.

The use of enormous stone masses merely for appearance's sake is not to be commended. Where large bluffs are considered to be necessary they should be built up of numerous flat layers of stone placed one above the other with intervening spaces filled with soil in which plants may comfortably live. What should be always remembered is that the purpose of the rocks is merely to provide surfaces for the trailing growths to adorn with foliage and flower, and to afford deep and wide fissures of gritty soil for their roots to penetrate, while the greater the diversity of exposures the more

ROCK GARDENS



extended will be the opportunities of selecting the most fitting situations for the various treasures grown. Where these points are carefully considered and acted upon the rock garden will eventually become well filled with flowers from which, here and there, portions of rock come into view.

Overhanging rocks should be strictly discountenanced, since these prevent the rain from falling on the soil at their base; the plants growing there become dry, and moisture is essential for all alpinists. In building a rock garden the stones should incline slightly backward so that rain falling on their outer surfaces is carried inwards and downwards to the roots. The forward face of each rock should be placed a trifle behind that of the one immediately beneath it, so that the rain may descend successively into every crevice. Where the upper stones overlap those immediately below, no water can ever reach the roots, and the plants must eventually languish and die.

As regards the stone to be used in the construction of a rock garden, that of the district had better be employed for economy's sake. Limestone well weathered, sandstone or millstone grit, where obtainable, are well adapted to the purpose. Stone that is liable to become disintegrated should on no account be employed. In the structure of

the garden the forms of natural rock-stratification, all describing the same angle of slant, should, as far as possible, be imitated. Between these strata, crevices ranging in width from half an inch to six inches, filled with gritty compost, will give passage to the hair-like rootlets of the alpinists to the mass of soil at the back. The very smallest rock plants send forth immensely long roots. Little plantlets, barely an inch in height, will, if the rock at their back be carefully removed, be found to have penetrated with their roots into the grit-filled fissures a distance of three feet or more. This should lead to the assurance that alpinists must have their roots deep in the soil, where moisture and an equable temperature is maintained during even the driest weather, while they enjoy for their heads the fullest sunshine. In certain places vertical fissures, such as naturally occur in rock formation, should be provided, and ought always to be made narrower at the base than at the top, so that the soil, as it sinks, shall be firmly pressed against the sides of the rock. If they are constructed differently it will generally happen that the soil will, at parts, leave the sides of the fissure, and the roots will be exposed to the air, which may not improbably kill the plants.

Paths should wind about between the bolder bluffs. These should not be gravelled, but should be formed of flat irregularly-shaped stones sunk in the ground. In the interstices of these stones will grow arenarias, thymes, saxifrages, sedums, and linarias, and a number of dwarf plants that will soon hide the edges and enamel them with blossom, rendering the winding walks by no means the least charming portion of the garden. Where steep slopes occur these should be surmounted by steps of rough, flat rock, around which sea-pinks, gentians, corydalis, and violets will readily grow.

Soil is an important matter, and should be thoughtfully considered. Alpinists thrive best in a deep, cool, and gritty compost. The soil generally used in rock gardens is of far too rich a nature. A study of the plants as they live in their native Alps is only necessary to prove this. In numbers of cases they will be found growing in what any working gardener would deny to be soil, being merely an accumulation of disintegrated rock, broken up into minute powdery fragments, mixed with larger portions of stone, and totally devoid of humus, peat, loam, or leaf-mould. In this their roots often run to a depth of some feet.

As a rule the best compost for the choicer alpinists is one of grit, broken sandstone, and other stones, to which is added some peat and loam; but there should be a greater proportion of stony or gritty particles than soil. Some rock plants succeed best in peat, but these are comparatively few in number. The natural habitat of the plant should also

be considered, and the question as to whether it affects a limestone or granitic region. In the former case limestone chippings added freely to the soil will generally be found beneficial, while for plants coming from a granite country lime must be carefully excluded.

Rock gardens are constructed in varied forms, three of the most characteristic being respectively the outcrop garden, the defile, and what may be termed the amphitheatre. The first is formed at the base and in front of a steep hill, so as to present the appearance of a natural outcrop of rock from the hillside. The defile is constructed where no hill formation exists by excavating an artificial gorge ten feet or so in depth, and forming the sides of rockwork, and the amphitheatre by utilising a dell, which may have to be further excavated, as a rock garden.

It is always well to delay the planting of the rarer alpine for six months or more after the formation of the rock garden, in order that the soil shall have had time to settle thoroughly, and to become well solidified previous to their introduction.

Of the choicer alpine the following are some of the best:—*Androsace*: These are a charming race of creeping plants. *A. lanuginosa*, from the Himalayas, bears flesh-pink rose-centred flowers. It requires a sunny site and gritty soil, and should be protected from winter rains by a sheet of glass slightly raised above the plant. It sometimes proves difficult to grow, and will not succeed in all gardens. *A. sarmentosa*, also from the Himalayas, bears bright rose blossoms, and puts forth numerous rosettes, carried on long, slender stems,

which root readily if the stems are buried in soil. *A. foliosa*, from the Himalayas, is the most robust of the race, and bears pink flowers. It requires a well-drained position, facing south. Other good sorts are *Chumbyi*, *Carnea*, *Chamæjasme*, and *Villosa*. *Cyanthus lobatus* is a beautiful blue-flowered Himalayan plant that blooms in the early autumn. It should be grown in loam, leaf-mould, and grit, facing south-east. *Daphne Cneorum* is a charming little dwarf shrub, bearing fragrant pink flowers. It succeeds best in gritty compost of loam and peat, but is by no means an easy plant to grow well. *Ramondia pyrenaica* is an attractive plant with lavender-blue flowers, about an inch across, borne on stems some six inches high. It does best in perpendicular fissures of rock facing north, and there is also a white-flowered variety which is very pretty; the allied *Haberlea rhodopensis* will succeed in a similar situation. *Edraianthus* (*Campanula*) *serpyllifolia* is a lovely little plant of dwarf growth, bearing large purple flowers, often in such abundance that the plant is completely hidden by them. It may be grown in a fissure of the rocks, facing south, in very gritty loam, and it will also succeed on the top of a wall. It is an extremely pretty plant, and everyone should grow it. *Shortia galacifolia* is a beautiful plant bearing white prettily-fringed flowers on red stems in the spring. In the autumn the foliage becomes deep crimson. It likes a soil of sandy peat, and should have a partially shaded position. *Shortia uniflora* was introduced a few years ago from Japan, and has larger flowers than *S. galacifolia*. It appears to prefer a position close under the north side of a rock, but has not proved



very amenable to cultivation. *Shortia uniflora grandiflora* is a variety with larger flowers of a soft pink hue, and seems rather less difficult to grow than the type, and is doing well in a shady site in several gardens. *Omphalodes Luciliae* is a beautiful and rare alpine, a native of Asia Minor, which generally succeeds better in the north than in the south of England. The best site is on the north-east side of a high rock. A compost of loam, peat, and grit in equal proportions appears to meet its requirements. Its flowers are of a beautiful pale blue. *Morisia hypogaea*: This is a charming little plant bearing small very bright yellow flowers, and blooms very early in the spring. It is of fairly easy culture, and will succeed in leaf-mould, loam, and grit, but a large proportion of old mortar rubble should be added to the compost, as it is very partial to lime.

THE PRACTICAL EXEMPLAR OF ARCHITECTURE—LXVIII

IN the survey of William the Conqueror the town of Henningham (now Hedingham) was held by Alberii de Vere, the forbears of the Earls of Oxford. It was the posterity of this Alberii who built the castle (which gives the name to the place, for it came to be called Henningham ad Castrum, to distinguish it from Sibil-Henningham) that stands to this day, a vast monument to an ancient family. It rises austere, like a huge grey rock, from a girdle of trees. Until the year 1625 it remained in the possession of the Earls of Oxford. Castle Hedingham Church, lying almost in the shadow of the Norman Keep, is itself as ancient as the Conquest—only it has been so much overlaid by later additions and rebuildings that the original nucleus is scarcely to be discerned. A Norman doorway and a few windows make up the sum of the old features, which are of stone, whilst the later, more interesting, work is built of flint and brick. The often recurring ornaments—the Boar and Mallet—testify to the munificence of the founders, many of whom have found their last resting-place within the church. The building is dedicated to St. Nicholas, and “was appropriated to the Prior and Convent of the Place, founded by Alberii de Vere II, and ’tis probable that the Cure was supplied by Priests of the said Priory, or some secular Priests made Curates of it, till the Dissolution, from which time it has continued a Curacy or Donative, not charged with first Fruits or Procuration.”*

The building must have undergone a fairly complete restoration at the end of the sixteenth or

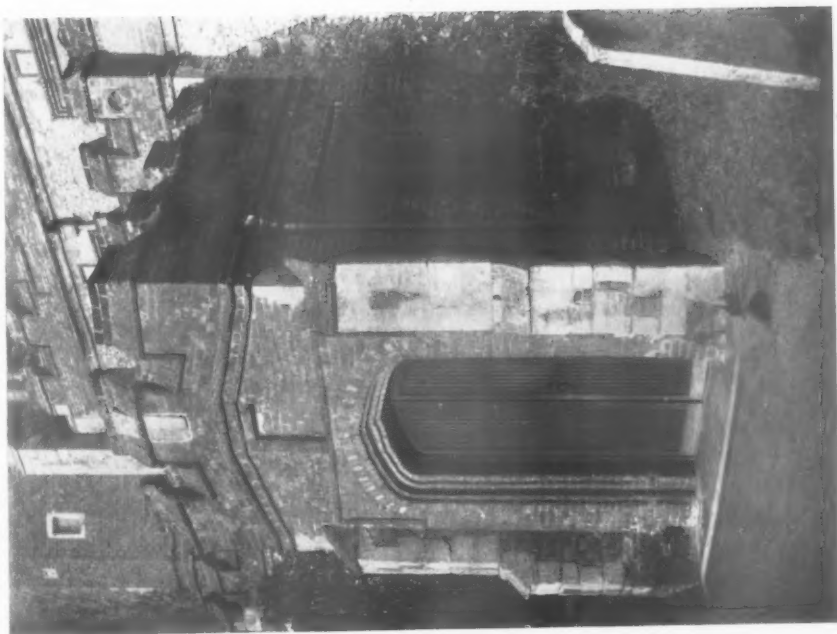
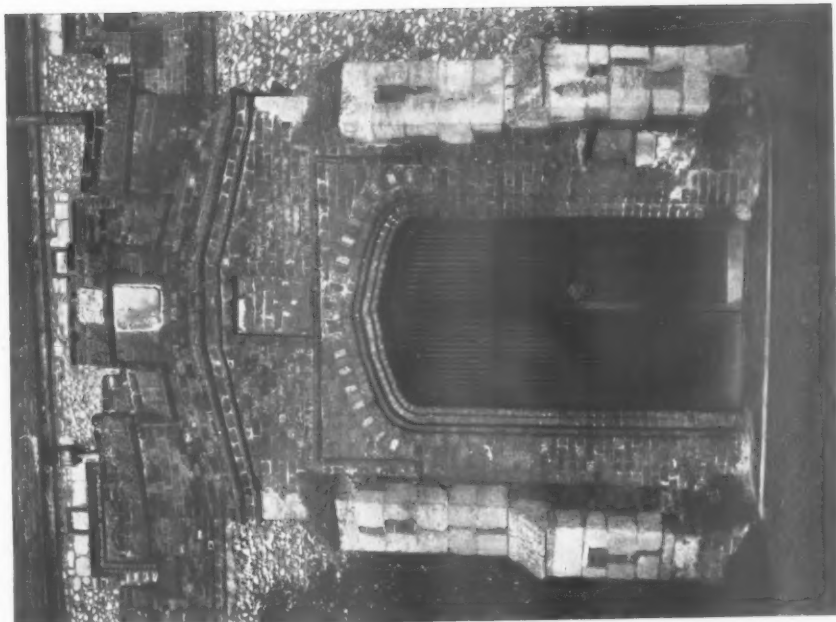
the beginning of the seventeenth century, for the brick battlements, the splendid tower, the delightful porch, all seem to belong to this period. But it is chiefly the brick tower, rising to a fair height above the battlemented parapets, and clustered round with buttresses, that gives such a fine character to the church. The brick porch, shown by the accompanying illustrations, is another interesting and characteristic feature, although not so well designed as the tower. It is too high in proportion to its width to be a perfectly successful design. There is, however, much to recommend it. It is of a fairly unusual type, quiet and pleasant in its effect, and extremely simple. The brickwork is interesting, and a good deal of “texture” is the result of the admixture of glazed headers with the plain work. On the sides these headers form a diaper, and on the front they mark the relieving arch. Moulded bricks have been sparingly used, for hood moulds, strings, and window sills. The stone facings to the buttresses are a happy innovation, and give strength to these features. Altogether it is as pleasant a union of materials as one may find anywhere. The small windows at the sides of the porch are built of brickwork, the mullions being half a brick thick and moulded; from them four-centred arches spring. The lintel over the double lights is flat. The whole design is almost austere in its plainness. But the nature of brickwork is such as to discountenance too florid ornamentation: for its building, the joints, the manifold constructional features, are its sufficient ornament. What is so difficult to understand to-day is that art should be displayed in essential construction!

HOGARTH'S HOUSE AT CHISWICK

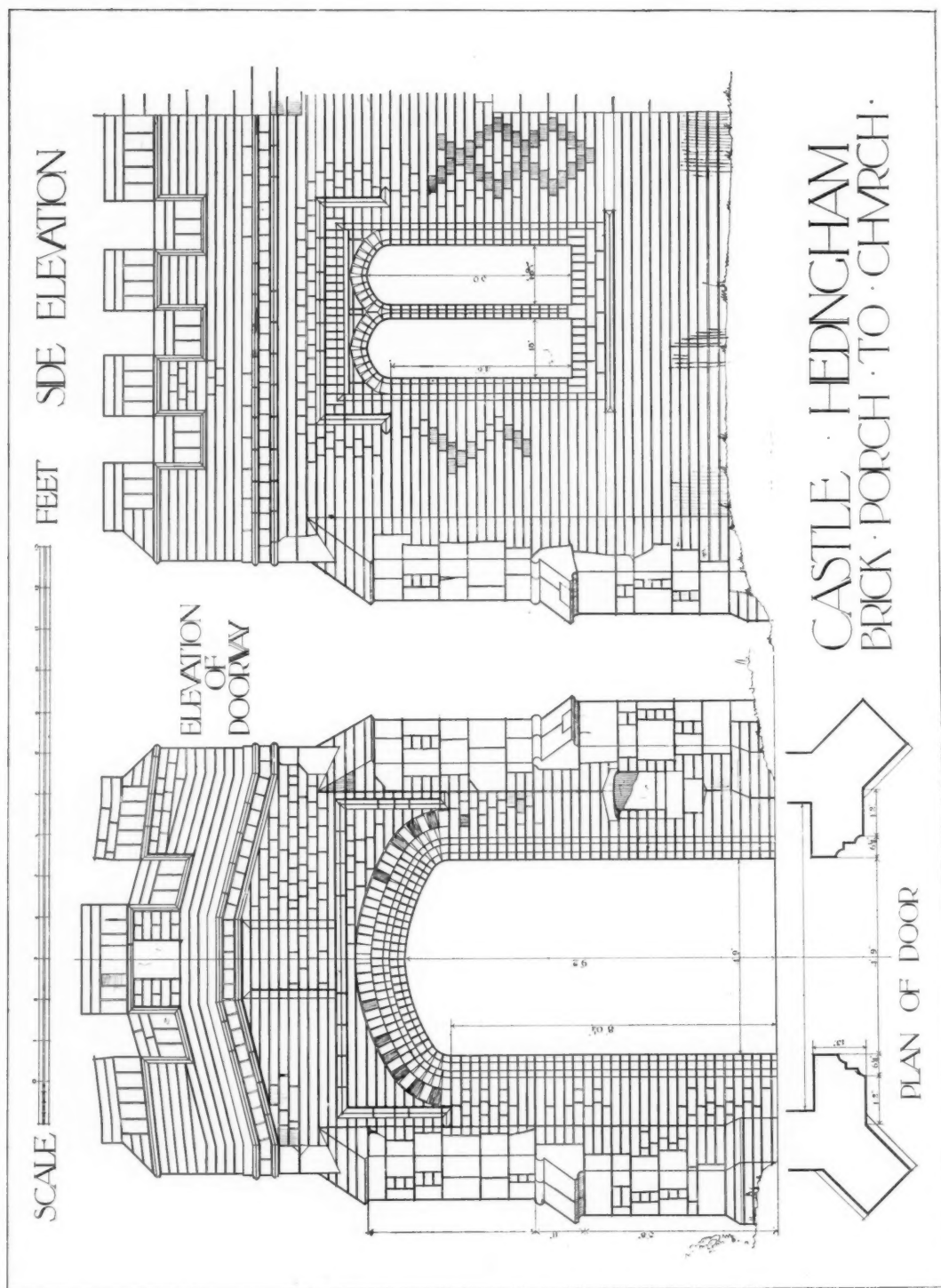
REFERRING to the article on “Hogarth and his Country House at Chiswick,” which appeared in THE ARCHITECTURAL REVIEW for December last, Mr. W. B. Hopkins, of Berkhampton, writes: “The oriel window shown on p. 311 evidently formed a model for Hogarth when he drew his political caricature representing Wm. Pitt endeavouring to set the world on fire and Lord Bute extinguishing the flames with a jet from a Union Fire Office engine. The jet is directed against the flaming ‘world,’ which takes the form of a geographical globe set up over a doorway in a street scene. Above the globe is this identical oriel window, and upon its roof are four flower-pots which look very much out of place in the city, but which were quite likely to have been before the artist’s eyes as he sat in his garden in the rural solitudes of Chiswick and sketched in his oriel.”

* “Magna Britannia.”

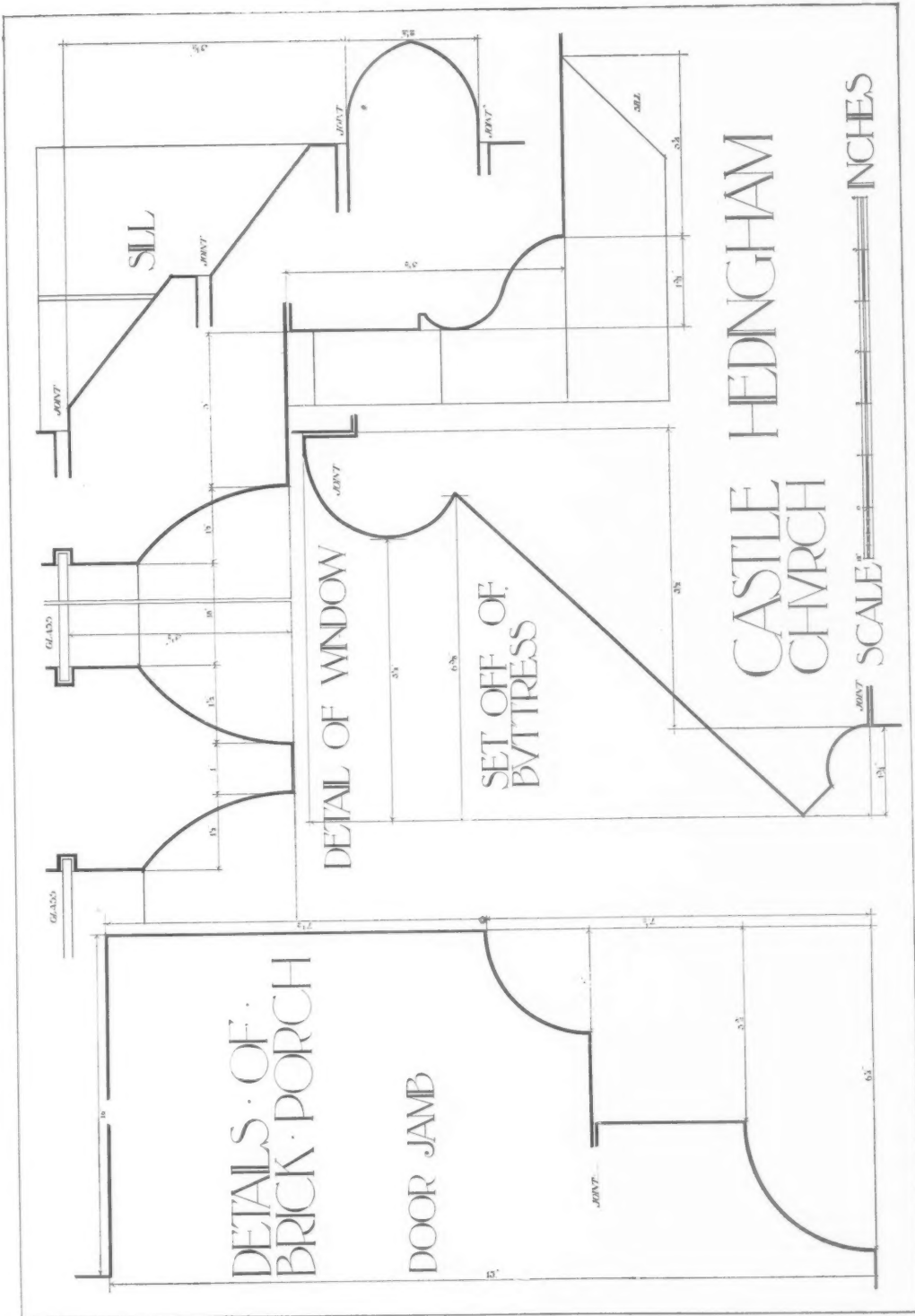
THE PRACTICAL EXEMPLAR
OF ARCHITECTURE



PORCH TO CASTLE HEDINGHAM CHURCH, SUFFOLK



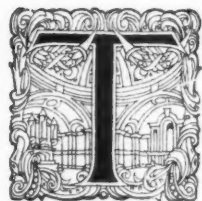
MEASURED BY J. M. W. HALLEY AND DRAWN BY W. GODFREY ALLEN



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ROME UNDER THE RENAISSANCE POPES

BY W. H. WARD, M.A., A.R.I.B.A.



HERE has recently been published, in French, a handsome volume¹ in which the author has undertaken to describe the life of Rome at the culmination of the Renaissance. The wealth and amusements of the cardinals, the private life of the popes, patrons of art and literature, the university, the theatre, the populace and its festivals, the law courts and the municipality, the religious ceremonies, the customs and superstitions, are among the headings of a series of chapters, in which effective use is made of a mass of most interesting information gathered from a great many sources. In a work so encyclopædic in its scope no single topic can receive a treatment that will satisfy specialists, and those whose main interest is in the world of art may perhaps feel that the intense artistic activity which so strongly characterised Rome in the early sixteenth century hardly receives justice. They will find, however, much matter of interest and many curious details relating to this branch of the subject in the chapters entitled "Les Mécènes" and "Les Transformations de Rome"; it is to these we shall confine our remarks.

Ever since the time when the Western Empire crumbled to fragments under the impact of the barbarian forces of the north, the glamour of the vanished greatness of the Eternal City haunted the imagination of Europe, of the popes, of the people of Rome itself. From those living amid the squalor and degradation of her ruined state went up the lament:

Roma, Roma, Roma,
Non è più com'era prima.

But the legend of ancient institutions and magnificence remained an abiding inspiration. A vague memory of the republic was a stimulus to the leaders of mediæval popular movements. Mediæval popes dreamed of regaining for themselves the universal sway of the emperors. Never, perhaps, did the people and rulers of the city quite lose the hope that its ancient splendours would one day be restored, and at no time in history did this hope seem nearer fulfilment than under the Renaissance popes. The prestige of the spiritual headship had indeed been diminished by the Great Schism, during which Christendom had been scandalised by the spectacle of rival popes at Rome and Avignon anathematising one another, and the dream of universal power had sunk somewhat into

the background. The vicars of Christ were fain to content themselves with a moderate territorial principality, accompanied, occasionally at least, by the confused ambition of establishing a hegemony over a once more united Italy; yet, with their final return to Rome, the desire revived to make it a capital worthy of the wider claims which in theory they never abandoned.

The task was a colossal one, and might well have staggered rulers less penetrated with the Renaissance faith in external beauty. Rome in the first half of the fifteenth century was diminished to a third-rate town, an agglomeration of squalid hovels with a disproportionate profusion of churches, mostly in an advanced state of dilapidation. Here and there some stately ruin of antiquity or the giant fortress of one of the great barons overtopped the maze of mean streets, which were mere unpaved, tortuous alleys, often so narrow that two horsemen could scarcely pass in them. Cattle grazed, not only in the abandoned Forum, but even in the most frequented squares. Apart from the two isolated walled districts beyond Tiber—the Borgo and the Trastevere—the inhabited region consisted almost entirely of the district between the river, the Capitol, and the foot of the Quirinal, while a region of vineyards, ruins, and waste spaces lay between the shrunken city and the massive girdle of the Aurelian wall that defended it. To evolve out of this unpromising material a capital which should rival and surpass Milan and Florence was the aim of the fifteenth- and sixteenth-century popes. Their efforts were carried on with such vigour that it was said of Nicholas V, who died in 1455, as of Augustus of old, that he had found the city of brick and left it of marble. Since, however, the same boast was made in the name of Sixtus IV, who died in 1471, and of later popes still, the success of each occupant of the chair of St. Peter can only have been a relative one. Indeed, chaos was the first and most obvious result of the town-planning measures they adopted, since the narrow streets were interrupted by the operation of cutting the new ones, which were often left incomplete for years, leading nowhere, and lined with half-finished palaces, and both were obstructed with building materials or the refuse of demolished houses. Rome at the accession of Julius II, in 1503, is described by a eulogist of that pope as resembling a conquered city rather than one regularly laid out.

The orderly beautification of the city, as well as its sanitation and convenience for traffic, was an object always kept in view by the popes of that age. Thus, in a bull in the year 1480, Sixtus IV authorised persons intending "to build new houses

¹ "Rome au Temps de Jules II et de Léon X." E. Rodocanachi. Hachette et Cie., Paris and London (King William Street, W.C.). 457 pages, 13 in. by 10 in. Price 30 frs.

of a nature to be an ornament to the city," to compel their neighbours to sell them their houses, if small or ruinous! One Pini was ordered by Bramante to build his house in a new street near St. Peter's in marble, not in common stone. An appeal to the pope resulted in an order pronouncing him unable to build in a suitable manner, and dispossessing him of the site. Permissions to build were often granted only on condition that the new houses did not overtop their neighbours.

In addition to restrictive ordinances, measures were also taken to promote improvements and embellishments. For instance, in 1517 the confraternity of St. Ambrose was authorised by the pope to lease its church and the adjoining houses to the Bishop of Imola rent free, on condition that he spent £320 on their restoration. Some towers in the Aurelian wall were leased by the pope, on the same terms, to be turned into dwelling-houses. Sites in new quarters were granted on advantageous terms, on condition that handsome buildings should be erected on them; and the law by which ecclesiastics were debarred from bequeathing house property in Rome by will—and in consequence of which they often allowed their houses to fall into disrepair—was repealed, to encourage their spending money "for the better embellishment, sanitation, and aeration of the city."

The chief agents of the popes for carrying out their public works were the *Magistri Aedificiorum*, or *Maestri di Strada*, the holders of an office dating far back into the Middle Ages, and combining the functions of district, sanitary, and highway surveyors, inspectors of nuisances, and contractors of public works. Among the drastic powers entrusted to them was that of pulling down houses condemned to make way for new streets, if the proprietors refused to do so, and of indemnifying themselves for this work by the sale of the materials. The papal exchequer was, indeed, often hard put to it to find funds for its extensive operations. Certain import taxes on goods arriving by sea were allotted to the building of St. Peter's, but this revenue was eked out from other sources. Julius II, for instance, received presents of lead and tin for the roof from Henry VIII, in return for which, it is true, he sent gifts of Parmesan cheese and wine. Another source of revenue, as well as a recurring incentive to city improvements, was provided by the periodical jubilees, which brought tens of thousands of pilgrims to Rome every twenty-five years, none of whom came without some offering.

Again, for city improvements the inhabitants of the quarter affected were subjected to a special "betterment" tax, and a general tax was also levied on all beasts of burden and vehicles in the city, to pay for paving certain streets. The Roman

authorities, it may be added, had one lever for enforcing payment not available to other governments, for they could, and did, extort it under threat of excommunication. When these resources failed they managed to satisfy their creditors or pay compensation by other expedients. Contractors were sometimes paid by the grant of building sites at greatly reduced rents, or by remission of a "betterment" rate on property affected by the rectification of streets. The noble family of Capodiferro were indemnified for the removal of a bridge which connected two of their houses across a street, and was considered an eyesore, by perpetual exemption from taxation.

In some cases, however, owners of property which stood in the way of improvements applied in vain for compensation. This was the case, for instance, with Cardinal Ippolito d'Este, whose palace occupying a site in the vicinity of St. Peter's was confiscated and pulled down by the authorities during his absence abroad. So arbitrary did the expropriations become, and so harshly were they applied, particularly under Cardinal Armellini, minister of Pope Clement VII (1523-34), who was suspected of feathering his own nest in the process, that he incurred general execration. The popular feeling against him was voiced by Cardinal Pompeo Colonna, who exclaimed in a committee on ways that the most profitable measure that could be adopted would be to flay the minister and exhibit his skin publicly for money; to which Cardinal Armellini retorted that he was delighted to learn he would be worth so much after his death.

The documents quoted by M. Rodocanachi give some curious information as to prices and values at Rome at this period. It may be of interest to quote some, though the figures work out so low that it may be questioned whether his equation—1 ducat = 10 francs—is altogether satisfactory.

The great building activity having sent up the prices of building materials, Leo X, with that faith in the power of the State to override the laws of economics which has often characterised despotic as well as democratic governments, issued a decree that the price of bricks should not exceed a sum equivalent to 8s. per thousand, under a penalty equivalent to £80.

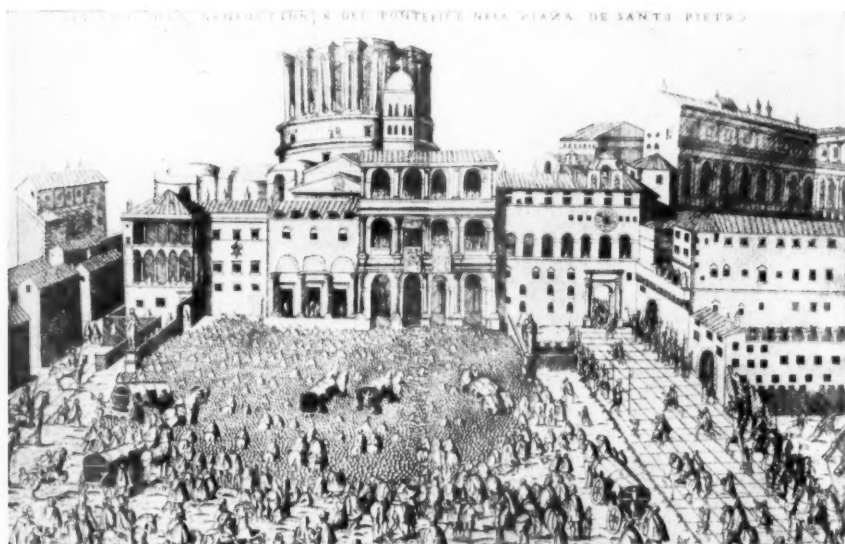
As regards the value of land and house property in Rome, we are told that in the populous quarters sites were let on building leases, whose length is not specified, at a ground rent of 5d. or 6d. per square "canna," a unit equal to about 172 sq. ft. The rent of a tailor's house with shop in the Borgo was £16, while that of a cardinal's palace varied from £40 to £150. It was paid half-yearly in advance. The price of a cardinal's palace was from £1,600 to £2,400. The deeds of conveyance

ROME UNDER THE RENAISSANCE POPES

usually stated that the site was sold from the centre of the earth to the sky.

In the process of transforming Rome, the cult of antiquity and the desire to create order and beauty, both characteristic of the Renaissance, necessarily often came into open conflict. The admiration for the remains of antiquity was in the main an æsthetic one. The love of ruins, *qua* ruins, was not developed till centuries later. Scientific archæology was almost equally remote from the ideas of that age. Only objects possessing definite artistic value or very obvious historic associations had a chance of survival. Architectural fragments or carved stones were only preserved if they could be utilised in new structures, and many ancient buildings were ruined in the search for statues or precious marbles. Anything which

It is perhaps not surprising that he spared no part of the old Basilica of St. Peter's, and, in spite of many protests, took no steps to preserve the innumerable tombs and memorials of all ages which it contained, for these were doubtless tainted in his eyes with mediæval barbarism; but he might at least have been expected to avoid the destruction of the monuments of Pagan Rome, such, amongst others, as the so-called "Meta" of Romulus, a large pyramidal structure in the Borgo. Others naturally followed so eminent an example, and we find, for instance, the Cardinal of Portugal, a fervent devotee of the antique, ordering the demolition of a triumphal arch which adjoined his palace, and one of the Orsini removing all but the bare shell of the Mausoleum of Augustus. Between the years 1508



ST. PETER'S AND THE VATICAN, ABOUT 1540

interfered with, or could be used as material for, the production of a new artistic creation was doomed, and the Rome of the Renaissance arose in a very literal sense out of the ruins of the old. Throughout the Middle Ages ancient buildings had been regarded as stone quarries, and had suffered equally, if not more, by the attempts to extract the metal cramps the walls contained, while marble was in request for lime. Even a sixteenth-century architect, Pietro Ligorio, states that he knew no better lime than that made "with the powder of those statues which are destroyed every day."

There was indeed no mitigation, but rather an increase, of the process of destruction at the Renaissance; for not only was building activity increased, but relics of antiquity often stood in the way of new streets. Bramante, that enthusiast for ancient architecture, appears to have been the worst of all offenders in this matter—so much so that he earned the name of "Il Ruinante."

and 1518 the great gateway of the Thermæ of Diocletian, the Temple of Ceres on the Via Sacra, portions of the Forum of Nerva, and the better part of the Basilica of Constantine, were all swept away. Later, Cardinal Farnese built his palace largely of materials drawn from the Theatre of Marcellus, the Forum of Trajan, the Arch of Titus, and the Temple of Faustina.

This vandalism, however, was not universal. Ever since the first dawn of the Renaissance a reverence for the relics of Rome's great past had been growing and spreading among the common people as well as the educated classes. The city statutes of 1363 imposed heavy penalties on those guilty of defacing the vestiges of ancient Rome, "the honour and embellishment of the city"; and a statute of the guild of masons forbade the members to break up marbles for the purpose of making lime. We have seen how little these ordinances were observed.

ROME UNDER THE RENAISSANCE POPES



FRESCOS ON THE RICCI PALACE, ROME

It is to the honour of Raphael that he was one of the first to make a stand against the work of destruction. In 1518 he was appointed Conservator of Antiquities, and in his report to the pope he laments the "barbarity which is a shame for the present time, and which Hannibal himself, had he entered the city, could not have surpassed." In the two remaining years of his life he seems to have made some attempts to stay the hand of the destroyers, and at least to collect inscribed and sculptured stones into museums. The Communal Council, too, of that period was stirred into some activity in the same direction; they appealed to the pope for his support, and even discussed a project for the restoration of the baths, arches, theatres, and temples, which, however, they were obliged to abandon for lack of funds.

It is more satisfactory to turn from destruction to achievement, and in the positive work accomplished in Rome the Renaissance popes and nobles have left us a rich heritage. The Tiber was dredged and banked. Several straight streets were laid out connecting the Vatican with different quarters of the city, such as the Via Alessandrina and Via Giulia, and many old ones were paved, rectified, and prolonged, such as the Via Lungara and the streets radiating from the Piazza del Popolo. These and other quarters were lined with palaces. Bramante's Cancelleria, Raphael's Palazzo dell' Aquila, Peruzzi's Farnesina and Massimi palaces, are but a few of the best known. Many such mansions were decorated both in their courtyards and on their street fronts with frescoes or with graffiti, in connection with which processes Rodocanachi gives some interesting information from contemporary sources. In addition to the

colossal works of St. Peter's, innumerable churches were restored, decorated, or built anew. In this category the restoration of Sta. Maria del Popolo by Baccio Pintelli under Sixtus IV, its frescoes by Pinturicchio for Julius II, and its Cardinals' tombs by Sansovino; the regilding of the ceiling of St. John Lateran with the first gold received from America; Lippi's frescoes at Santa Maria Sopra Minerva, Raphael's Sibyls at Sta. Maria della Pace, Bramante's circular cloister chapel at San Pietro in Montorio, are a few instances taken at random.

At the Vatican itself the activity was immense. The rebuilding of the old palace had been commenced by Nicolas V and finished by Alexander VI; Sixtus IV added the Sistine Chapel (whose roof was painted by Michelangelo in twenty-two months for Julius II), and Innocent VIII built the garden-house or "Belvedere" at the opposite end of a long narrow depression. Bramante schemed for Julius II the connection of these two buildings by means of arcaded galleries—the "Loggie" decorated by Raphael and his pupils, and later closed in. Thus a vast court was formed, at two levels connected by a monumental staircase and containing a splendid fountain.

So far as external splendour was concerned, Rome bid fair in the first quarter of the sixteenth century to regain her long-lost primacy of the civilised world. The Papal Court had gathered round it from all Italy, and even from beyond the Alps and seas, an army of artists—goldsmiths and printers, sculptors, painters, and architects—to whom was entrusted the task of making the metropolis of Christendom the most splendid city in the world. The Sangalli, Bramante, Fra Giocondo,



FRESCOS ON THE RICCI PALACE, ROME

Peruzzi, Raphael, Michelangelo, Pinturicchio, Cellini, Giulio Romano, and unnumbered others, spent their talents on the work. The various forces of the Renaissance throughout Italy were thus focussed on a single point, and out of this intensified activity arose that phase of the maturity of its art which has retained the name of "Roman." Though few, if any, of the artists who were its creators were of Roman birth or training, the name is justified by the fact that Rome provided the occasion and scene of their most brilliant work, and became the training ground of their most distinguished successors. They more than repaid the munificent patronage of the Papal Court by the unique splendour of their achievements, whose combined result formed a setting worthy of the splendid pageant in which the life of the Church of that day was expressed, and of the culture and luxury which attended it. Princes, nobles and merchants, ambassadors from all the Courts of Europe, ecclesiastics of high and low degree, friars and pilgrims, flocked to Rome on errands of devotion or superstition, ambition or diplomacy, gain, curiosity, or pleasure. Scholars, savants, and men of letters made Rome the mart of ideas. Literary and philosophic symposia, hunting parties, gorgeous church ceremonies, stage plays, and sumptuous feasts followed one another in dazzling succession, to the delight of eye, the senses, and the intellect. Only the spiritual side was omitted in this programme of a Church which had momentarily forgotten its *raison d'être*. The nemesis was at hand, though none then foresaw it. In a few years the Reformation was to absolve half Europe from its allegiance to the Papacy, and thereby strike a staggering blow at the prestige and revenues of Rome. A few years more, and in the name of the Holy Roman Emperor an army of ruffians, Catholic Spaniards and Lutheran Germans, both equally without faith or morality, fell upon the papal city and for nine months turned it into a hell of bloodshed and lust and pillage. The Holy Father trembled half-starved behind the walls of St. Angelo, whence he could see the flames of the burning palaces and hear the shrieks of the tortured, till the horde of malefactors, sated with orgy and plunder and decimated by pestilence, left the city little more than a heap of ruins.

It was the tragedy of the Renaissance that in almost every country of Europe its activities were throttled by some great political or ecclesiastical crisis, but nowhere was this crisis more sudden or awful than in Rome itself. Many of the great works contemplated were never begun, many of those in progress were interrupted never to be resumed, many of those executed were either totally ruined or so much damaged as to require extensive restoration. The life of the city gradually began

to resume its normal course, and a considerable building activity was again developed within a few years; but it required the work of two generations to obliterate the traces of the Sack, and it was not till the era of Sixtus V, the great building pope of the later sixteenth century, that Rome saw something like the fruition of the hopes of Julius and Leo, which M. Rodocanachi's erudite and scholarly work describes.

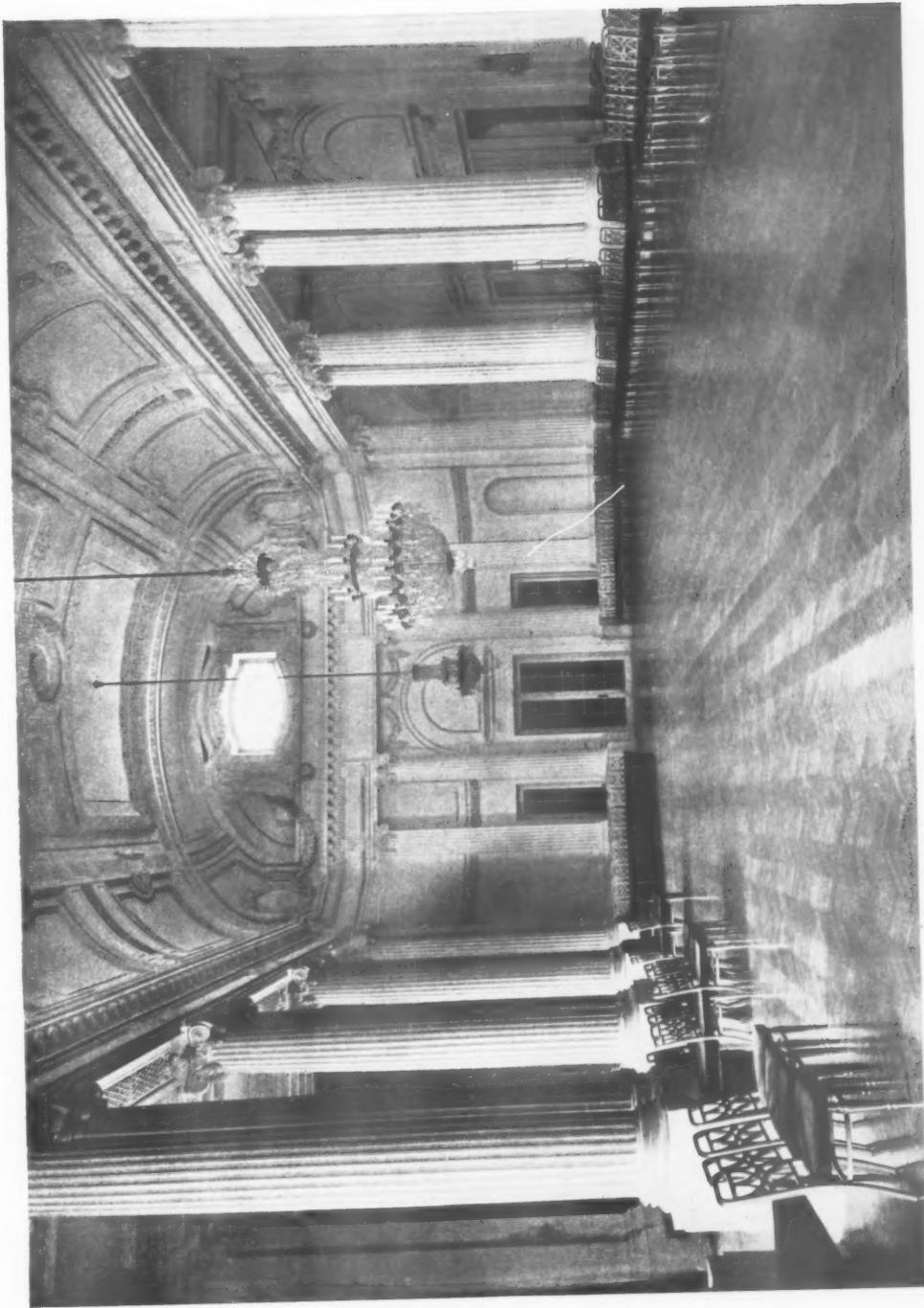
The volume is interspersed with a profusion of good illustrations comprising photographs of monuments and works of art, as well as reproductions of old prints and drawings, many of which throw a most interesting light upon the life of the Romans and the state of the city. Unfortunately, however, they are arranged with little regard to the text, and many of them appear not to be referred to. The usefulness of the work is also seriously impaired by the absence, too frequent in French books, of an index.

CURRENT ARCHITECTURE

INTERNATIONAL BUREAU OF AMERICAN REPUBLICS, WASHINGTON

WE publish in this issue a number of photographs of the above building, the reproductions being made from our American contemporary, *Architecture*. From time to time it is our practice to give illustrations of modern buildings in America, and we think that the present example is one further proof of the excellent work which is being done in the United States at the present time.

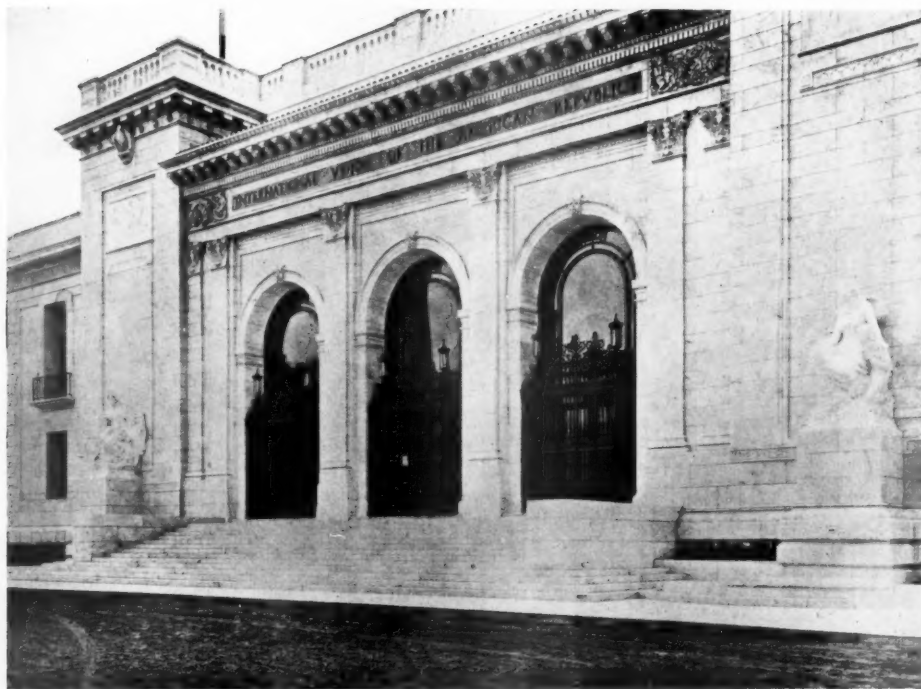
The American Republics are made up of thirteen practically independent commonwealths, and some years ago the desire of the representatives of these commonwealths to meet together to discuss common interests resulted in the formation of the International Union of American Republics, whose membership includes most, if not all, of the independent countries of South, North, and Central America. Its object has been primarily to develop closer commercial relations, secondarily to consider all problems of international welfare; and congresses are held of delegates from the different countries at frequent intervals. These congresses and the executive management of the union—which includes the publication of literature showing possibilities for exploitation, for railroads, and other investments, and also the furnishing to shippers of such information as they may need in regard to methods of transportation, customs requirements, and similar subjects—have required a building in which they may properly be housed. The problem was not entirely a simple one, since the largest rooms, and in a sense the most important for the use of the congress, are but rarely



INTERNATIONAL BUREAU OF AMERICAN REPUBLICS, WASHINGTON: THE HALL OF THE REPUBLICS
ALBERT KELSEY AND PAUL P. CRÉT, ARCHITECTS



General View of Entrance Front.



Detail of Main Entrance

INTERNATIONAL BUREAU OF AMERICAN REPUBLICS, WASHINGTON
ALBERT KELSEY AND PAUL P. CRÉT, ARCHITECTS

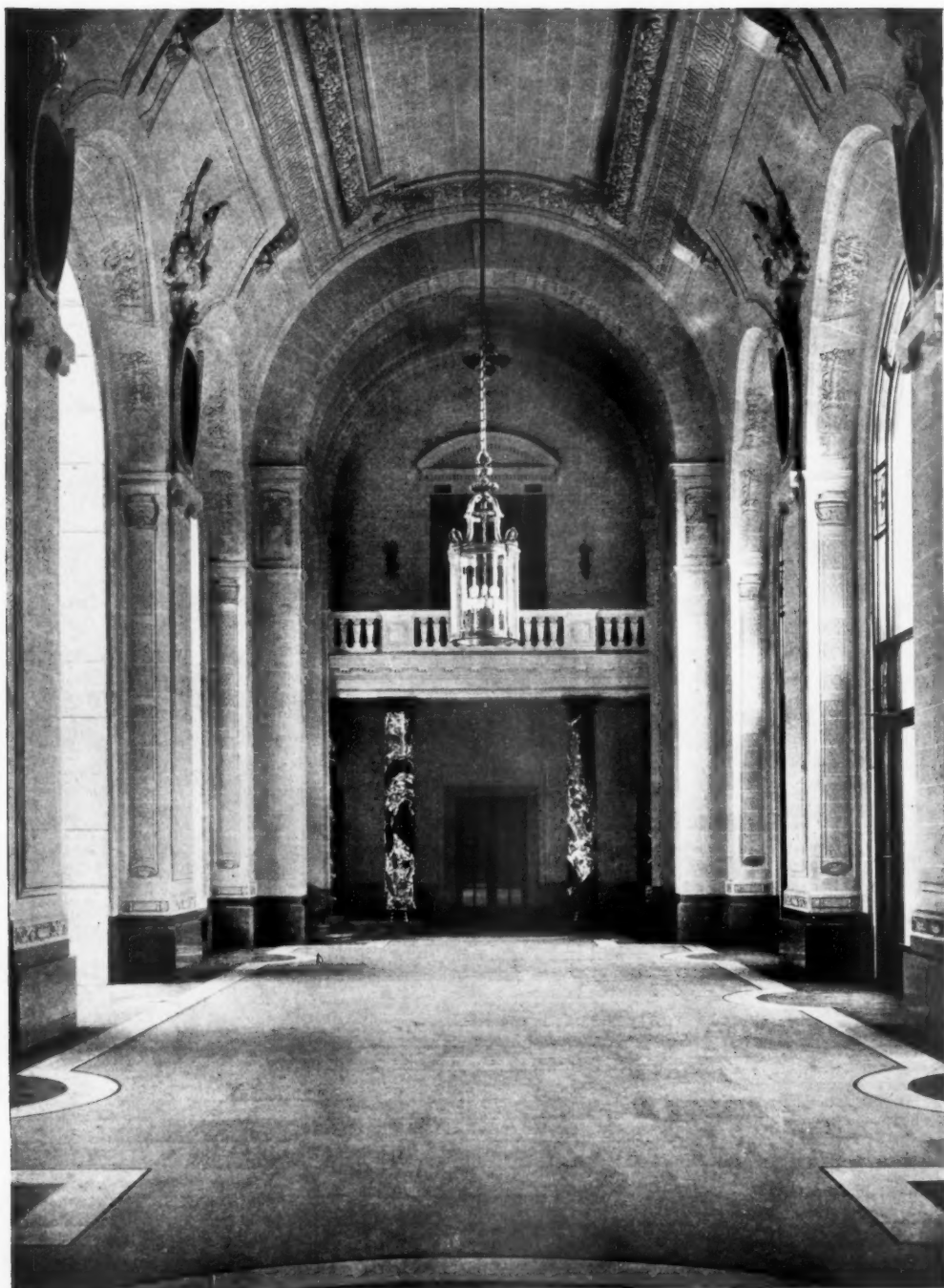


Directors' Room



Main Staircase and Patio

INTERNATIONAL BUREAU OF AMERICAN REPUBLICS, WASHINGTON
ALBERT KELSEY AND PAUL P. CRÉT, ARCHITECTS

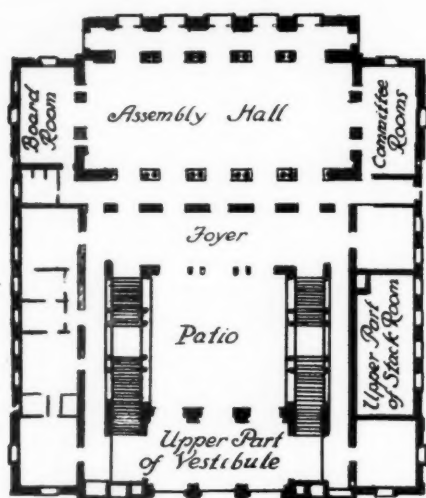


INTERNATIONAL BUREAU OF AMERICAN REPUBLICS, WASHINGTON: THE MAIN VESTIBULE
ALBERT KELSEY AND PAUL P. CRÉT, ARCHITECTS



INTERNATIONAL BUREAU OF AMERICAN REPUBLICS, WASHINGTON: THE PATIO
ALBERT KELSEY AND PAUL P. CRÉT, ARCHITECTS

CURRENT ARCHITECTURE



First Floor Plan

INTERNATIONAL BUREAU OF AMERICAN
REPUBLICS, WASHINGTON

used, as Washington is not the only city in which the congresses are held; the last one was held in Brazil in the building erected by the republic of Brazil especially for that purpose. The headquarters of the administrative part of the work is, however, in Washington, and adequate office space for the housing of the director, his staff, interpreters, and secretaries, forms an integral part of the scheme.

An open competition for the building was held, the successful architects being Messrs. Albert Kelsey and Paul P. Cr  t. The scheme chosen was (in deference to the sister republics) of the Spanish-American type, enclosing a central patio, but so modified as not to conflict in architecture with those Washington buildings with which it is in close proximity. The exterior appears very simple, yet it is a deceptive simplicity, since all important parts are enriched; the detail, however, is so delicately designed and so well placed that it does not interfere with the mass of the building. The treatment of the front with pylons reinforcing the triple entrance and simple plain windows defines the plan, and makes the entrance at once dignified and imposing. The main vestibule is an excellent piece of architecture, the material throughout being stone and marble; it is two storeys high, the ends being terminated with balconies supported on pairs of marble columns. At the side of each end of

the main vestibule are staircases to the first or principal floor, the administrative rooms being placed on the ground floor. The photographs show how well these staircases are treated.

The patio is especially successful; it is crowned by a frieze of coloured terra-cotta, enriched with the arms of the republics composing the union, each panel having in its centre the name of its national hero. But undoubtedly the finest piece of architectural design in the building is the hall of the republics. Here all national significance is omitted, the tablets at the four corners simply bearing the word "Pax." There is a great feeling of dignity about this room.

In considering this building we may again remark on the fact that modern American architecture of a civic or business character includes, in comparison with our own, a large number of excellent buildings. There is very little hesitancy about the work of American architects, and though we may bring forward the familiar criticism that it is all based on French work, or that the buildings of the Italian Renaissance have been very closely followed, we are still confronted with an array of imposing structures that have no equal in this country.



INTERNATIONAL BUREAU OF AMERICAN REPUBLICS, WASHINGTON:
MAIN STAIRCASE FROM FIRST FLOOR
ALBERT KELSEY AND PAUL P. CR  T, ARCHITECTS



Photo: Alexander Corbett

THE ROYAL ACADEMY OF MUSIC, MARYLEBONE ROAD, LONDON
SIR ERNEST GEORGE, A.R.A., AND ALFRED B. YEATES, ARCHITECTS



Photo: Alexander Corbett

ROYAL ACADEMY OF MUSIC, MARYLEBONE ROAD, LONDON:
MAIN STAIRCASE
SIR ERNEST GEORGE, A.R.A., AND ALFRED B. YEATES, ARCHITECTS

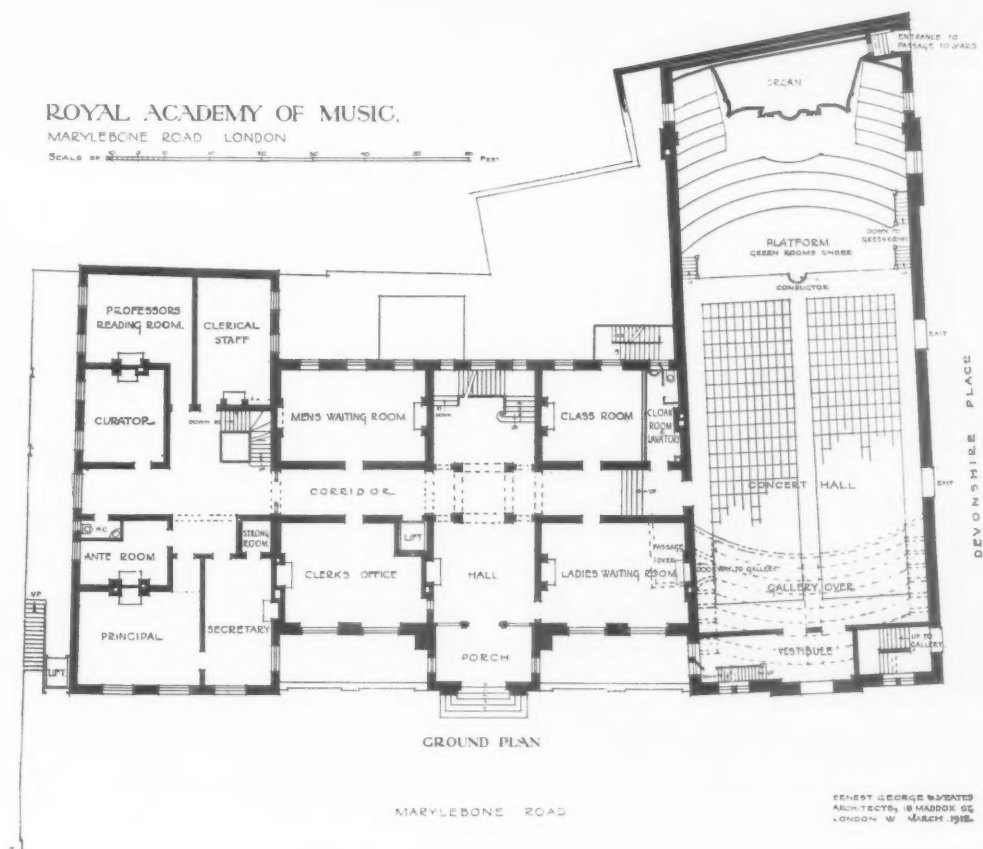


BOARD ROOM

Photo : Alexander Corbett

ROYAL ACADEMY OF MUSIC,
MARYLEBONE ROAD LONDON

SCALE OF 100





ROYAL ACADEMY OF MUSIC, MARYLEBONE ROAD, LONDON: ENTRANCE HALL
SIR ERNEST GEORGE, A.R.A., AND ALFRED B. YEATES ARCHITECTS

Photo: Alexander Corbett

THE ROYAL ACADEMY OF MUSIC

THE Royal Academy of Music, which for many years occupied six houses in Tenterden Street, Hanover Square, is now accommodated on a spacious site in the Marylebone Road in a building designed by Sir Ernest George, A.R.A., and Alfred B. Yeates. This structure is of Portland stone and brick (the facing bricks by Messrs. T. Lawrence & Sons) with roofs of thick green slates. The building has a centre and two wings, the concert hall forming one of the latter, where a side street gives secondary entrances and exits; this hall will usually be entered by students from within the building. (We regret that we are unable to include a photograph of it among the accompanying illustrations, as the hall is not yet in a finished condition: we hope to illustrate it later.)

With the object of soundproofing, the divisions between the rooms are double Frazzi partitions, and these are carried on separate joists. The fire-proof construction throughout, including the roofs, is of the same material. Double glass doors are used to all rooms opening upon the corridors, in which latter no voices or instruments are heard.

There are two organ-rooms in addition to the concert hall with its organ.

The clerical offices and waiting-rooms are on the ground floor, and in the well-lighted basement are large luncheon- and tea-rooms, as well as cloak-

room accommodation. A sloping way leads from the street to the basement, where lifts are provided for carrying pianos to the various floors. A vaulted vestibule leads to the marble staircase.

The concert hall has a wagon-roof of reinforced concrete, in which is top-lighting, in addition to the range of tall windows; the latter are fitted with a double thickness of glass to prevent disturbance to neighbours. The orchestra occupies a large portion of the space. Green-rooms, etc., are arranged beneath the orchestra.

The builders were Messrs. G. E. Wallis & Sons, Ltd., of Maidstone (who also executed the reinforced concrete roof over the concert hall), Mr. R. O. Norris being the clerk of works.

The sculpture and carving was executed by Mr. Albert Hodge, and the iron gates, grilles, and balustrade to staircase by J. Starkie Gardner.

The steelwork is by R. Moreland & Son, Ltd.; fire-resisting floors by The Frazzi Construction Co., Ltd.; wood-block floors by The Acme Flooring and Paving Co., Ltd.; mosaic floors by Diespeker & Co., Ltd.; electric-light fittings by Strode & Co.; locks, etc., by Comyn Ching & Co., Ltd.; marble work by J. Whitehead & Sons, Ltd.; sanitary work by Dent and Hellyer, Ltd.; plasterwork by J. Priestley; heating apparatus by W. Gould; lifts by the Otis Elevator Co., Ltd.; electric wiring by H. M. Leaf.

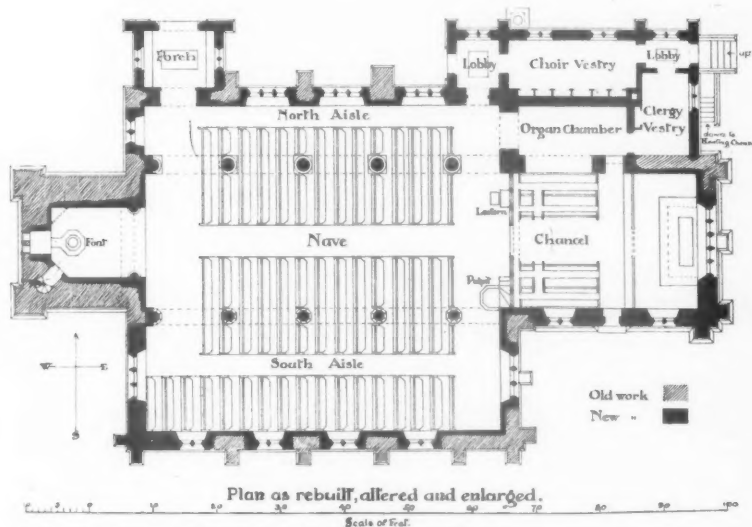
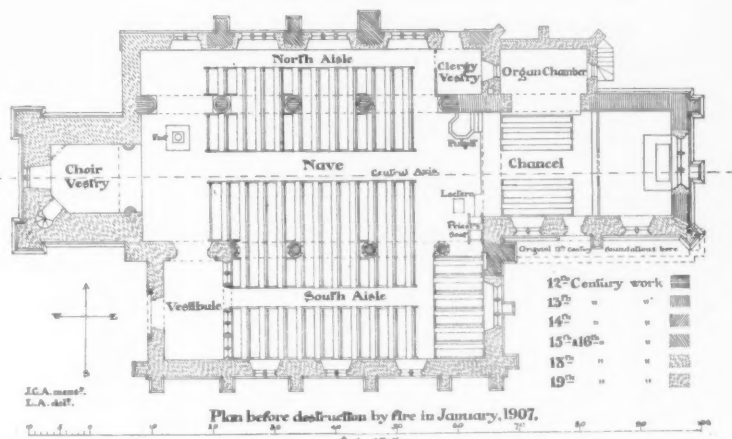
ST. WILFRID'S CHURCH,
KIRKBY-IN-ASHFIELD, NOTTS

THE former church at Kirkby-in-Ashfield was burnt down on January 17th, 1907, and the new building, here illustrated, incorporates all the old work that was interesting from its antiquity and sound in its construction. Everything was destroyed by the fire except the stonework of the spire and the outer portions of the external walls, some of the tombstones on the floor, and one or two brass memorial tablets. The oldest work now existing is the thirteenth-century wall and buttress at the north-east corner of the chancel, with the lower part of the eastern wall and the dwarf buttress under the east window. The south wall of the chancel has been rebuilt in its original position on the old thirteenth-century foundations, in line with the arcade between the nave and the south aisle, and the western wall has been rebuilt 3 ft. farther west, in a line with that of the north aisle. A porch has been built at the north-west corner of the church, and new vestries for the clergy and choir have been added on the north side of the chancel, behind the organ chamber, which has been enlarged and opened towards the north aisle. The space below the tower, formerly used as a choir vestry, has been converted into a baptistery, the thirteenth-century arch between the tower and the nave having been reproduced as it was before. In accordance with the requirements of the committee, in order to gratify local sentiment, the twelfth-century arcade on the north side of the nave has also been reproduced, with its circular columns and richly moulded semicircular arches, as regards the three western bays, the two eastern bays having been made to correspond (as nearly as possible, the end arch being narrower), in place of the wider arch and blank wall previously there. This will explain the apparent incongruity of the arcade with the rest of the building, which has been designed in the fourteenth-century manner, the arcade of that period on the south side having been reproduced with some modifications in the mouldings and carved capitals and bosses. The nave and south

aisle have been built the same height as before, but the north aisle has been raised to correspond with the rest of the building, with a ridge and gable-ended roof similar to that of the south aisle, instead of the former low lean-to roof. The nave roof is continued over the chancel without any intervening chancel arch (now unnecessary), but a carved oak screen has been substituted.

With the exception of the east window, inserted in 1768, and the south windows of the chancel, all the former windows were modern and consisted of double or triple lancet-headed lights without cusping or tracery. The new windows have traceried and cusped heads of "Decorated" style and of considerable variety of design, the tracery of the five-light wide east window being of unusual character, with a large central light in the form of a cross, and having cusped and pointed arms and carved bosses at the intersections.

The walls are built of local and Bulwell stone, with Weldon stone dressings. They are lined internally with Kirkby stone, the inside dressed stone



ST. WILFRID'S CHURCH, KIRKBY-IN-ASHFIELD, NOTTS
LOUIS AMBLER, F.R.I.B.A., ARCHITECT

CURRENT ARCHITECTURE



Interior, looking East



View looking across Chancel

ST. WILFRID'S CHURCH, KIRKBY-IN-ASHFIELD, NOTTS
LOUIS AMBLER, F.R.I.B.A., ARCHITECT

being from the Ancaster quarries. The roofs are covered with green Buttermere slates, and the moulded ridges and gutters and the rainwater pipes, with heads of varied ornamental designs, are of lead. The floor of the church is laid with marble mosaic, that in the chancel being of a rich character, with the sacred monograms and emblems of the Passion for devices, while that in the baptistery has the emblem of the Trinity (three fishes in a circle). The old tombstones have been relaid near their former positions, and portions of four old stone coffin-lids, with incised crosses and implements (probably of the thirteenth century), have been laid in the floor of the porch, next the side walls. The floors under the seats and in the vestries are laid with wood blocks.

All the doors and fittings are of oak, and, with the Ancaster stone font, are from the architect's designs, except the lectern. The chancel screen, pulpit, organ-case and choir stalls are richly carved and traceried, and the bench-ends in the nave and aisles have a variety of carved finials. The whole of the stone and wood carving is symbolic and emblematical, and has been designed by the architect and executed by Messrs. Bowman & Sons, of Stanford, the general contractors. Mr. Louis Ambler, F.R.I.B.A., was the architect. The mosaic paving is by Messrs. Seear & Co., the wood-block flooring by Messrs. Nichols & Co., the heating apparatus by the Meadow Foundry Co., the gas fittings and door furniture by Messrs. Jones & Willis, the organ by Messrs. C. Lloyd & Co., the glazing by Mr. W. Pearce, and east windows of stained glass by Messrs. James Powell & Sons. The total cost of the work was about £9,000, nearly half of which was paid by the fire insurance.

Two interior views, with plans of the church before the fire and as rebuilt, are here reproduced.

A STAINED-GLASS WINDOW.

IN Mr. Frank Brangwyn's house at Hammer-smith we had the pleasure of inspecting, a short time ago, a three-light window for St. Mary's Church, Bucklebury, which has been executed from his cartoons by Mr. Silvester Sparrow. A photograph of it is here reproduced, but it should be mentioned that as the window was set up in the drawing-room it was not at all equally lighted, which made an adequate reproduction impossible; so that the accompanying illustration is to that degree deficient, while, of course, lacking the translucent colour that gave the original such charm. The subject is Christ on the Cross, set between the two thieves, with figures of St. John, the Mother of Sorrows, and Mary Magdalene in the lower portion of the window. The glass is built up in varying layers, producing the purest of colours, the purple-blue of the veil of Mary Magdalene being especially fine. Altogether it is a very noteworthy window, alike for its colour and for its drawing.



Photo: "Architectural Review"

THREE-LIGHT WINDOW FOR ST. MARY'S CHURCH, BUCKLEBURY, NEAR READING
CARTOON BY FRANK BRANGWYN, A.R.A. GLASS BY SILVESTER SPARROW

CURRENT ARCHITECTURE

NEW TOWN HALL, BERLIN.

THE new Berlin Town Hall shows the solution of a difficult problem, viz.: to express the wealth and importance of Berlin as a city, and at the same time to house an elaborate bureau whose offices are necessarily of all sizes. A difficult problem, certainly; for the small elements are apt to take the reins and run a race on their own account. The mean size of the numberless rooms dictates the heights of the various floors; their numerous windows also definitely govern the arrangement of the façades. So that there

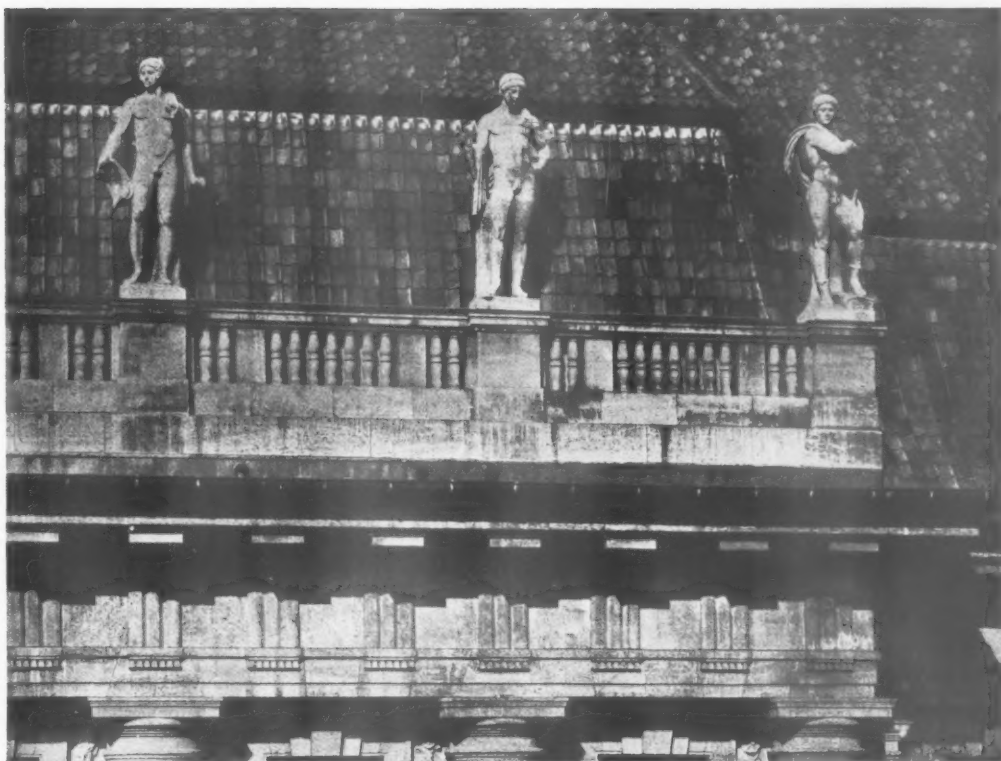
Ludwig Hoffmann has certainly contrived to make a noble and dignified monument to utility. Whether or not the London County Council offices will be another such monument remains to be seen. After a great scheme has been settled, cheese-paring on the part of the promoters does not tend to this result. The authorities of Berlin, according to a writer in the *Berliner Architekturwelt*, on the other hand, have given their architect every encouragement. As a consequence his interest has not flagged, and his inspiration has carried him through to the end.



ASSEMBLY HALL, NEW TOWN HALL, BERLIN
LUDWIG HOFFMANN, ARCHITECT

are certain disabilities which have to be overcome before it is possible to give a monumental expression to the outside. It is in this very expression that good architecture of the twentieth century surpasses that of the late eighteenth; for at that date it was sufficient to compose a fine façade, after Palladian rules, without too much consideration of the levels of floors, the need of light, etc. Today that would not be tolerated. Possibly we have gone to another extreme and disregard too much abstract proportion and the art there is in giving conscious and noble expression to the many and various exigencies of modern civilisation. And yet Architecture, if it is to remain the "Mistress Art," must do this.

The site, an irregular one, does not permit of axial planning, and its four sides are of different lengths. It is interesting to notice how the architect has treated his corners to convert the obtuse and acute angles of this site into right angles; how he has changed the axes of the great hall and the entrance hall at the intermediary vestibule, so that the first should be approximately axial with the two main fronts. In his treatment of the four elevations the architect has adopted the same treatment throughout—a system of Doric pillars and pilasters set upon a high rusticated basement, to which he gives, in the columnar centre part of each façade, greater or less projection as seemed appropriate to their importance.



NEW TOWN HALL, BERLIN: DETAIL OF ATTIC TO FAÇADE TO KLOSTERSTRASSE
SCULPTURE BY IGNATIUS TASCHNER

In the centre of the façade to the Jüdenstrasse a tower has been placed (some 260 feet from the pavement to the top of the crowning figure), consistently designed with the rest of the building. Municipal dignity always demands a tower. In this case, as in many another, it is questionable if it be an improvement. It has a certain use as a sort of museum, and is also an aerial vantage point for sightseers of the kind who love a *vue à vol d'oiseau*. Access from the lower floors is afforded by a lift. It is somewhat unusual to employ such a high basement, reaching as it does to the middle of the first floor. To the writer it seems that the horizontal effect would have been increased by a strong band of stone under the sills of the first-floor windows. This would have been a great improvement, for there is a disagreeable tendency in high buildings to run into vertical strips, and this fine building is not without a suspicion of the fault. Above the basement is the range of some heavy Doric pilasters and columns (about 32 feet high), with their traditional entablature and high German roof. The windows are rusticated throughout.

There is a certain downright solemnity and grandeur, almost an Egyptian enigmatic quality, about this work of Ludwig Hoffmann, which cannot be questioned. The quality is consistently



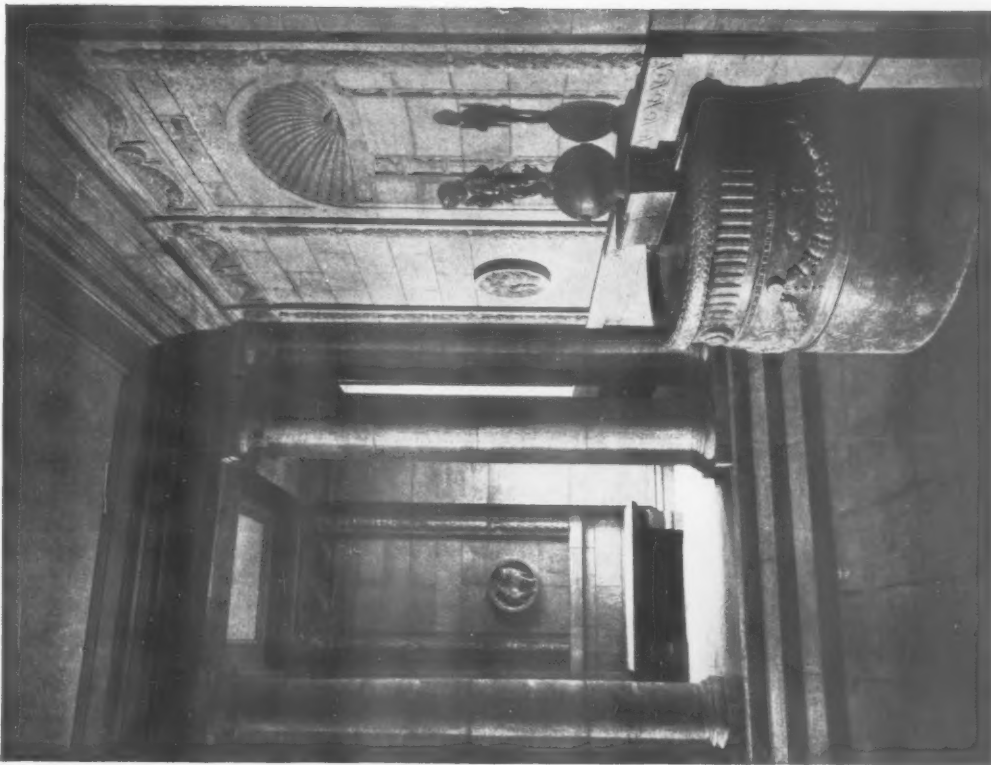
NEW TOWN HALL, BERLIN: SCULPTURE AT
ANGLE OF JÜDENSTRASSE AND STRALAUERSTRASSE,
BY GEORG WRBA



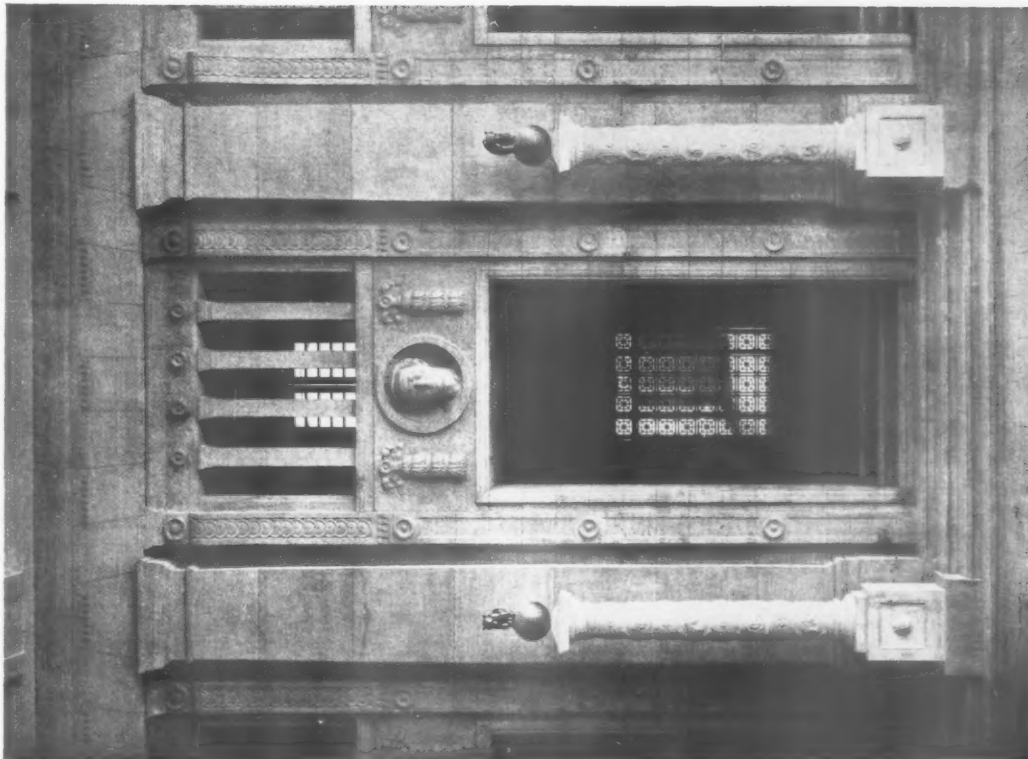
Rear Elevation to Klosterstrasse



Front Elevation to Judenstrasse
NEW TOWN HALL, BERLIN. LUDWIG HOFFMANN, ARCHITECT

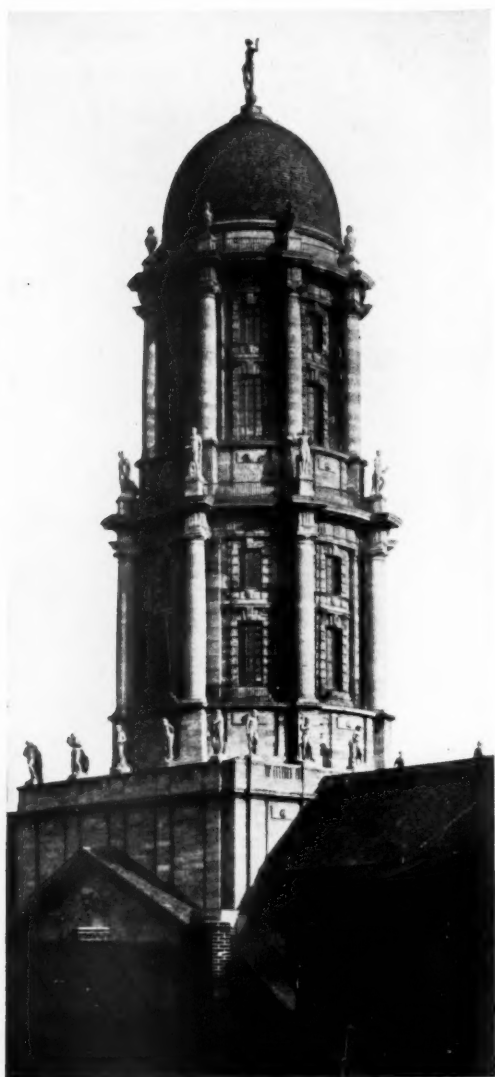


Vestibule from Klosterstrasse



Detail of Vestibule from Jüdenstrasse

NEW TOWN HALL, BERLIN
LUDWIG HOFFMANN, ARCHITECT



NEW TOWN HALL, BERLIN: THE TOWER

expressed: nowhere does it lapse into mere gracefulness, into the loveliness which is Aphrodite's. Rather it keeps at its level of Herculean strength—perhaps over-development. It would be interesting to inquire here how far an individual can express in stone the very colour-texture of his thoughts. We cannot tell what kind of man Ictinus was, nor how the architect of the Pantheon looked when he had thrown his vault over the void without shutting out the heavens, his model, nor how the builder of Salisbury felt as he saw the wand-like spire rise higher and higher into the empyrean. These things we cannot tell from building. It is true broad national characteristics are traced upon ancient walls, and the individual's part is merged in that of a whole society. Modern architecture is more personal, it very often is eclectic, and is therefore susceptible of being impressed more or less by the strong individuality.

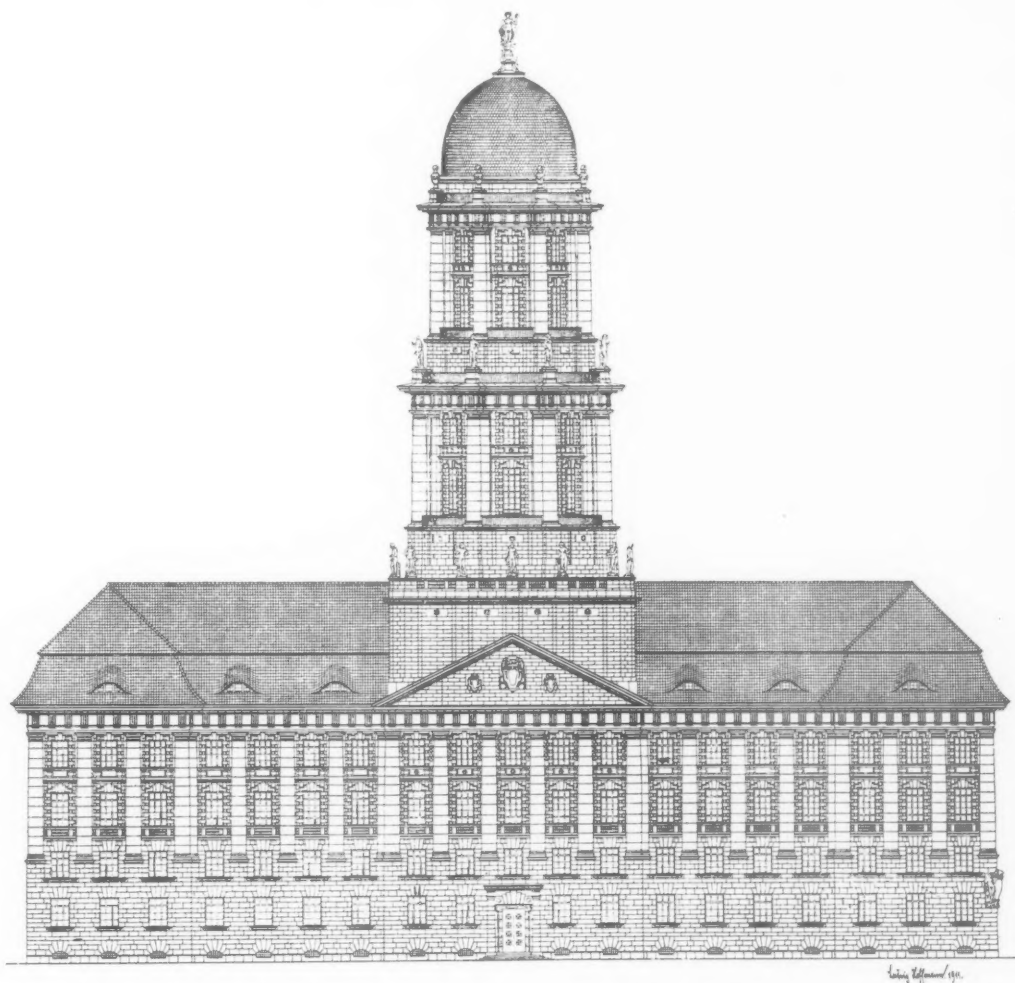
The Architectural Review

Ludwig Hoffmann has certainly succeeded in impressing his own strong personality on this building, which he has treated with more severe architectonic forms than is his wont. Although there is a heavy Palladian tradition in Berlin for its public buildings, it must not be forgotten that the *art nouveau* thrived there exceedingly and touched every art activity with its grotesque and ugly finger. Music alone, being a youthful art, escaped and continued to develop in the direction of technique. The advent of the new Town Hall would seem to imply that its reign in architecture is at an end. Of the stone details it may be said they are designed with such a nice perception of weight and value that they merge into the general *ensemble*. They do not jar, they do not strike a wrong note by reason of overboldness or timidity, but by their rightness maintain the due and proper pitch in the harmony. The columns, the entablature with its balustrade, the windows, the doors, are all conceived as parts of a whole, are all simple and bold like the main scheme. At one corner a cartouche has been placed, after the manner of Florentine Palazzi—whence so much of the general inspiration is derived. Now, here was a pitfall for the feet of the unwary—to make it too fine and delicate, to treat it as a thing apart. But no, it has been pitched in the proper key, and is indeed a masterpiece of architectural sculpture.

NEW TOWN HALL, BERLIN:
HALL LANTERN

It may not be amiss to speak of this sculpture. The criticisms of the figures carved on a new building in the Strand will be remembered. A Slade professor pronounced them as pre-Phidean; but it seems to the writer that the sculpture on the Berlin Town Hall, of which the sculptures in the Strand are but a faint echo, really has the massive qualities of the work of the early Greek statuary, and the figures in the pediment of the temple of Zeus at Olympia are the progenitors of it. Not

work of Ignatius Taschner and Georg Wrba of Dresden; the three cartouches in the pediment are by Josef Rauch, who has also carved some of the smaller heads, etc. The expectation excited by the outside is not disappointed by the inside. There is, of course, not much scope in the offices, but the connecting corridors are excellent. Here again the Florentine motif is evident. The Assembly Hall is, of course, the important feature of the interior. It is built of grey limestone with



NEW TOWN HALL, BERLIN: FAÇADE TO JÜDENSTRASSE

(From the "*Berliner Architekturwelt*")

only the figures supporting the corner cartouche, but also those which surmount the balustrade are massive, clean cut, and their parts so simplified and conventionalised that they play their rôle admirably as decorative adjuncts. There is little doubt but that the nude treated in this noble fashion is one of the finest additions to monumental architecture. The figure-sculpture is the

a base of reddish marble. If it were ceiled at the springing of the plaster vault a double cube would be enclosed. The height of the vault added to the close spacing of the pilasters makes the hall look narrow and high. The writer in the *Berliner Architekturwelt* says that in effect it is courtly, and that the effect on entering from the low and comparatively dark vestibule into the light hall is

CURRENT ARCHITECTURE

surprisingly fine. To the present writer, however, its nakedness is somewhat oppressive. One can imagine the innermost hall of an Egyptian house being thus gloomy and mysterious.

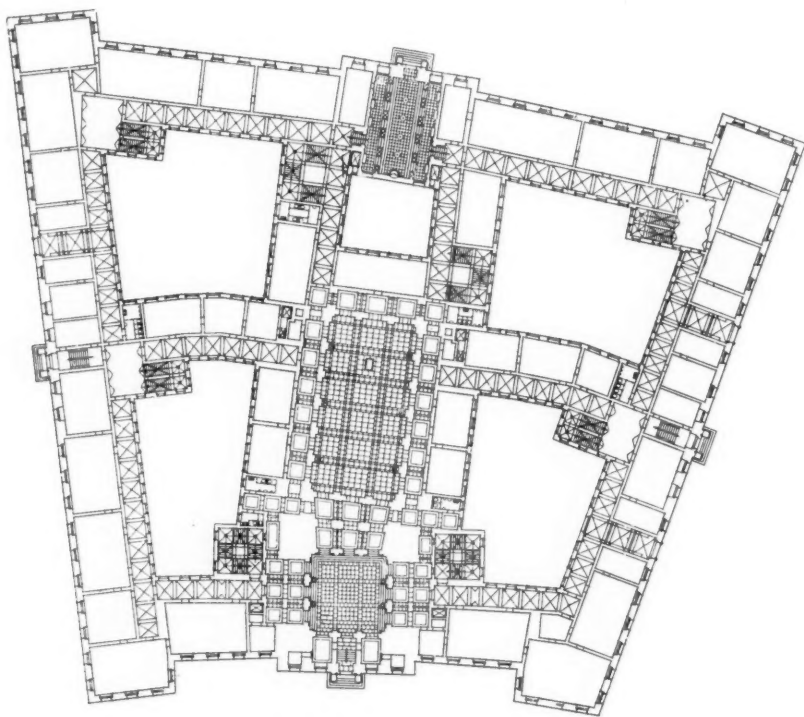
The spacing of the pilasters seems to have been dictated by the width of the corridors, which are vaulted in square compartments; but it seems that the design of the hall should first have been settled, and then the corridors vaulted in accordance with the design of the first. It might quite well have been vaulted in oblong compartments. It may be, however, that the architect aimed at some particular effect and could obtain it by no other means. Corridors on two levels run round the hall, from which they receive their light. They look like deep holes cut in the mysterious walls of the hall, and the writer cannot but think the architect aimed at this kind of impression. To the success of the general effect we have seen that the stonework details and the carving contributed. The same success has attended the ornaments. Fine bronze candelabra, modelled by the sculptor Georg Wrba, adorn the hall. In the vestibule are small sculptured pillars surmounted by a ball on which a bear (the crest of Berlin) is posturing. The pillars and the carved work over the doors are by Ignatius Taschner. It is seldom indeed to find work which is consistent from beginning to end, and whether we like this new Town Hall or not,



NEW TOWN HALL, BERLIN: CORRIDOR

it is impossible to deny its power and reticence, and also its consistency—all good qualities.

J. M. W. HALLEY.



NEW TOWN HALL, BERLIN: GROUND-FLOOR PLAN

THE COMMITTEE FOR THE SURVEY OF THE MEMORIALS OF GREATER LONDON



It has been my desire, in these monthly notes on the subject of our London topographical survey, to record not only the work which has been accomplished by our own members, but also to call attention to the research of others who, in the course of divers pursuits, add valuable material to the store of historical knowledge which we seek to compile. Our secretary, Mr. Lovell, has for some time been preparing an important index to drawings and photographs of London buildings, both within and outside our own collection, and it is greatly to be hoped that one day an exhaustive catalogue of all the available topographical material will be made for the use of future students and historians.

Meanwhile our members will do well to make a note of the more important publications that affect their work. Prominent among these is Mr. Starkie Gardner's important work on "English Ironwork of the XVIIth and XVIIIth Centuries." London has had in the past an altogether amazing display of the craftsmanship of the smith; but ironwork, unless well looked after, falls very easily into disrepair, and then is given short shrift at the hands of the improver. The beautiful wrought-iron gates, screens, and railings that adorned and dignified the ample courtyards of the older houses are swept away in these less spacious times, when forecourts and gardens are alike built upon. Yet Mr. Gardner has found that, of his 250 illustrations, it has been desirable to include 25 per cent. of London subjects, and even these represent but a small proportion of the examples in London which he has described or to which he has referred. If we add to these the specimens to be found in Greater London and the places within a short radius, we find the number very greatly increased, and we may justly regard his book as having accomplished no insignificant portion of the task which the Survey Committee has in hand.

To the reader of Mr. Gardner's book it is no news that its great value depends on a large amount of genuine research into the work of the English smiths, and the identification of their names with existing examples. This is of distinct topographical interest; but Mr. Gardner has gone further than this. He has found that gates and railings are easily removed from their original home to that of some ambitious purchaser, and he has been careful to state, wherever it has come to his knowledge, the place of their origin as well as their present position. We could wish that the latter had always been completely described, for

the fact that a road or street is often given without the number of the house detracts a little from its topographical value.

Mr. Gardner has included several London gates and portions of ironwork which have been removed or have quite disappeared, one of the most interesting being the fine set of railings to Crowley House, Greenwich, a beautiful mid-seventeenth century mansion which stood on the site now occupied by the London County Council Electricity Generating Station. Other examples of ironwork that have been lost to London include the gates and screen to Powis House, Great Ormond Street; the screen to Monmouth House, Soho Square; the gates to the inner court of 102 Leadenhall Street, and those to Buckingham House; besides some charming railings that surrounded the fountain in the Middle Temple, the beautiful balustrade to the garden steps of Lord Thurlow's house in Great Ormond Street, and a torch-extinguisher from Spring Gardens.

I have not space to give more than a *résumé* of the subjects illustrated from the ironwork that still exists in and about London. The districts laid under contribution include Central London, Mayfair, Kensington, Chelsea, Lewisham, Enfield, Edmonton, Mitcham, Clapham, Stratford, Snaresbrook, Woodford, Romford, Chadwell Heath, Hampstead, Chiswick, Tottenham, Ham Common, and Dulwich, all of which furnish fine specimens of the iron gates that used to be considered so necessary to the equipment of the Queen Anne and Georgian house. Railings are illustrated from Chandos House, Queen Anne Street, 1 Portman Square, Sir W. W. Wynn's house in St. James's Square, 12 and 14 Grosvenor Square, Hanover Square, and Great Ormond Street. There are balustrades from Somerset House, Chesterfield House, and Queen's House, Chelsea. The balconies of Boodle's Club, and the fan-lights of Drapers' Hall (now at Messrs. Feet-ham's) and of 13 Mansfield Street are among the examples of Robert Adam's design in ironwork. Not the least interesting part of the book contains a most useful series of lampholders from John Street, Adelphi, Downing Street, Chesterfield House, 35 and 45 Berkeley Square, 37 Grosvenor Square, and 41 Charles Street; and added to these are some charming lamp-brackets from Sackville Street, Savile Row, and one of the important series of six in the courtyard of the Admiralty.

Numerous as these illustrations are, it should be the object of our members to collect every example that remains to us, and no more interesting task could be devised than the search for

all the variations in the several types. Mr. Gardner gives us views of the weather vanes at Lambeth Palace, Greenwich Hospital, and at the churches of St. Stephen Walbrook, St. Mary-le-Bow, and St. Ethelburga. The photographer with a tele-scopic lens and a little enthusiasm to aid it might make a most useful collection of these beautiful finials to our spires and cupolas.

WALTER H. GODFREY.

THE PLANNING OF DELHI



THE event of the month in town-planning circles is the appointment of a committee of three to advise the Indian Government on the planning of the new capital city of Delhi. As we stated last month, Mr. John F. Brodie, M. Inst. C.E., City Engineer of Liverpool, was first appointed, and it has since been announced that Mr. Edwin L. Lutyens, F.R.I.B.A., will be the architectural expert. These two gentlemen and Captain G. S. C. Swinton, of the London County Council, will form the Advisory Committee. Mr. H. V. Lanchester, F.R.I.B.A., will, it is announced, be associated with them, although his exact position is not defined. It is satisfactory that the architectural profession is so well represented, and that the engineer who will act in conjunction with Mr. Lutyens and Mr. Lanchester is one of the broadest-minded and probably the most able of our municipal engineers.

The work of Mr. Lutyens and Mr. Lanchester is too well known to our readers to require any detailed reference here. In the domain of town planning neither has been a pioneer, but since the subject has come so much to the fore they have taken that high place in the counsels of those connected with the movement for which their architectural standing and experience gives them the best of qualifications. Mr. Lutyens has been prominently associated with the work of planning the garden suburbs of Hampstead and Knebworth. Mr. Lanchester, as honorary secretary of the Town Planning Committee of the Royal Institute of British Architects, and as lecturer on Civic Design to the University of London, has given much time and thought to the subject. Both men have high qualities, and we feel sure that the great opportunity which this appointment gives them will not be neglected.

Mr. J. S. Brodie has made a name for himself in connection with town planning as a result of the policy which he has caused his city to adopt in laying out wide arterial and circumferential

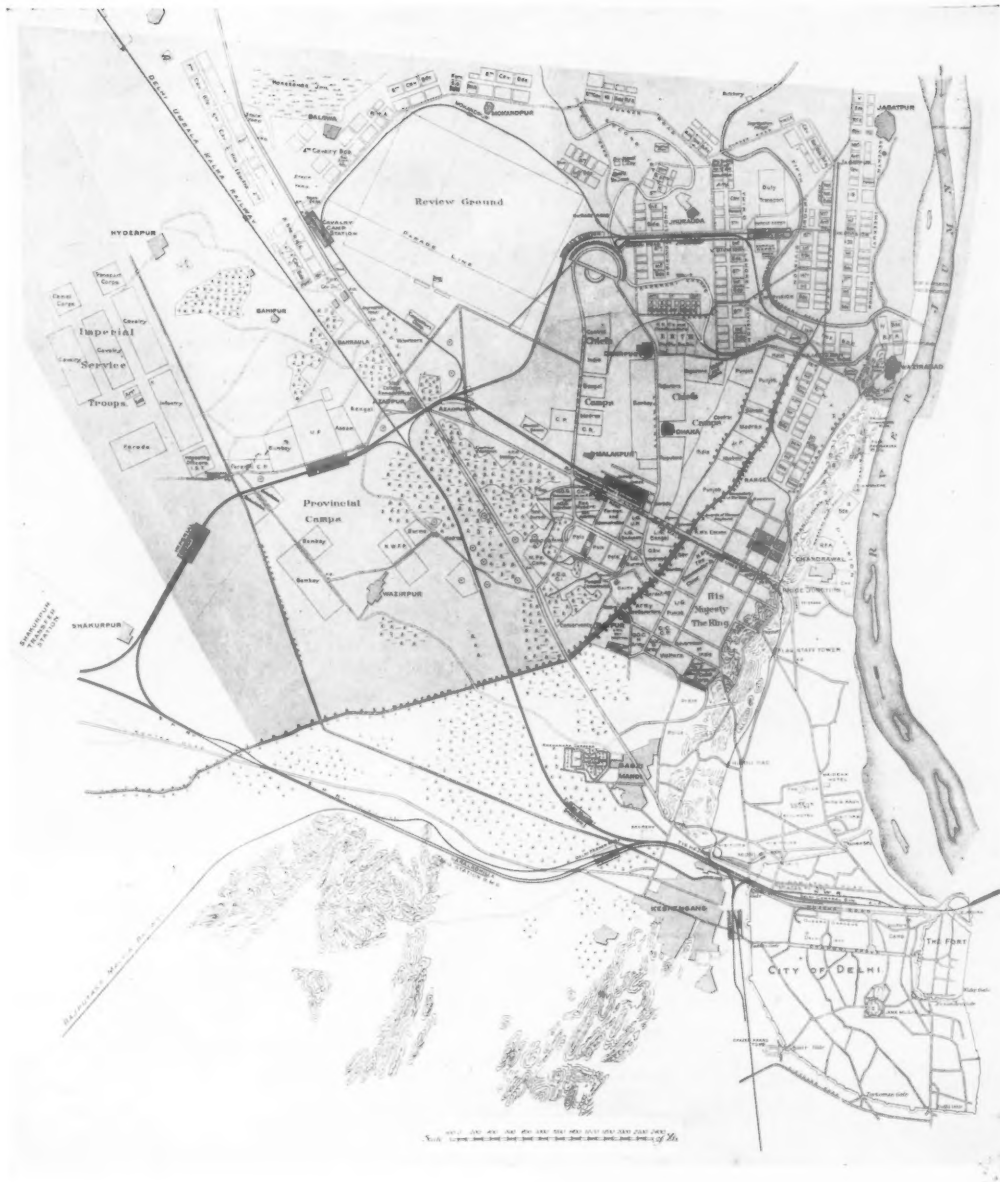
roads in Liverpool. No city in England can boast of the exercise of more intelligent foresight in this respect, and the wide tree-planted boulevards of Liverpool are a standing memorial to Mr. Brodie's prescience and skill.

Captain Swinton's appointment as chairman is regarded by some as less easy to understand, but he has not been indifferent to town-planning work in England, and has a knowledge of India and Indian problems which will no doubt prove useful. His various pamphlets on London traffic problems, and his suggested scheme for the creation of a "garden road" leading out of the west of London, show that he goes to India with a good claim as a sympathetic authority on some aspects of the subject regarding which the Committee will have to advise the Indian Government.

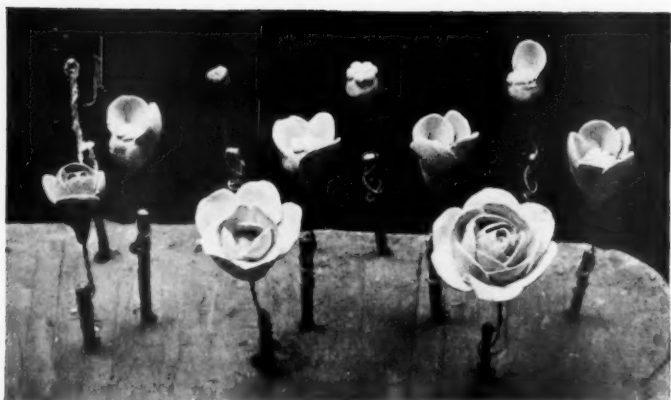
The present city of Delhi has a population of 208,000, and is noted for some existing features of historic interest and architectural beauty. As will be seen from the plan, it is enclosed by a wall $5\frac{1}{2}$ miles long. Although its secondary streets are narrow, it has several good main thoroughfares, including one which is no less than three-quarters of a mile long and 74 ft. wide, with a double row of pipal-trees lining both sides on a raised path. The new city will grow up on the open land outside the walls of the existing city. This open country is the site of historic battles and of former cities that have passed into oblivion and left nothing behind but the historic records of their being.

The work of the Committee will partly consist in choosing the site of the new capital, a matter of no easy accomplishment, as the level of the land and of the river and the character of the soil present great engineering difficulties. It looks as if the first part of the task will fall most heavily on the engineer, who will have to determine the questions of dealing with the sanitation of such a difficult site. The Committee will be in India for about five months, but it may be nearer a year before the result of its deliberations can be known to the public.

Looking nearer at home, it seems a pity that the sound judgment of the Indian Government in preparing a plan of their new capital should not have been preceded by a similarly wise decision of the Government at home to lay out the new town of Rosyth on the Forth under the guidance of skilled experts. We understand this matter is not being entirely neglected, but it is at best being dealt with by local and sporadic effort without sufficient encouragement from the Admiralty authorities, who are primarily responsible for the creation of the new town, and who should have been the first to appreciate the necessity of having it built according to a proper plan.



PLAN OF THE CITY OF DELHI
ISSUED AT THE TIME OF THE CORONATION DURBAR, 1911



THE VARIOUS STAGES IN THE
MAKING OF A ROSE IN STUCCO-DURO

STUCCO-DURO : A DISCOVERY

THERE has been a constant desire amongst architects during the last fifty or sixty years to emulate the spirit and character of the plaster decoration and ceiling work of the seventeenth and early eighteenth centuries, such as that at Ashburnham House, Belton House, Holyrood Palace, Acklam Hall, and Brickwall House, which was executed *in situ*, mostly by Italian, French, or Flemish modellers. The beauty of this work is due to the employment of a particular plaster material and process that has not been available in modern times, the secret of the composition and manipulation having been lost. After many years of experiment, however, it has been rediscovered by Mr. George P. Bankart, who is now associated with Messrs. George Jackson & Sons, Ltd. The plaster used for this work is the

material spoken of at length by Vitruvius in his writings on architecture, namely, very carefully selected lime which has been slaked for many years and mixed with finely-sieved marble dust and various ingredients to regulate the setting, as required, according to the size of the work or the thickness of the plaster, which is worked in the fingers or with the iron trowel. This plaster is very fine and smooth, and extremely sensitive to the touch of the modeller. It has a fine reflective quality possessed by no other plaster, can be

NEW WORK :
DETAIL OF CEILING
BY GEORGE
P. BANKART



OLD WORK : DETAIL OF CEILING AT ACKLAM HALL

worked very thinly and delicately, and dries out *very hard*.

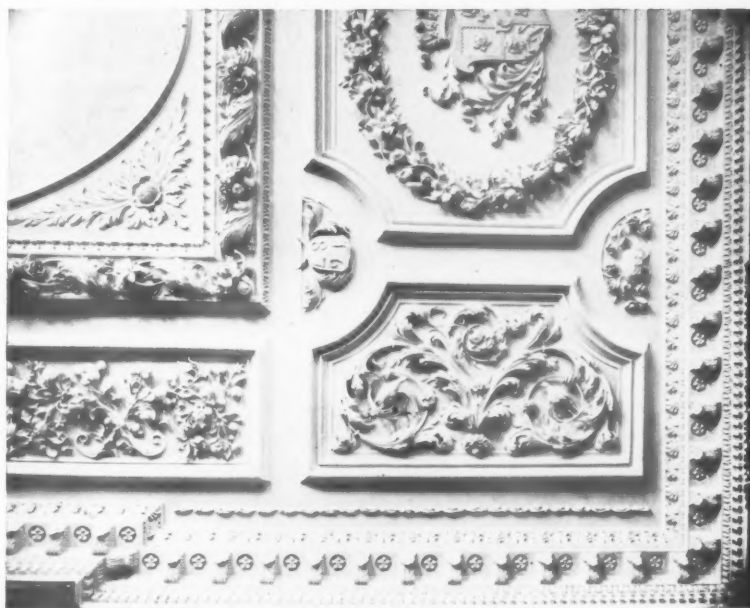
From the accompanying illustrations it will be seen that by no other process or material could modelling of this deeply wrought and overlaid nature be produced. As bearing on this fact we may mention that twelve years ago, when the famous ceiling at Kilmainham Hospital, Dublin, was taken down and remade owing to its dangerous condition, the modelled detail had to be reproduced in compressed *papier mâché*, because the art of making the old stucco-duro plaster of the original ceiling was lost, and the material was thought to be unobtainable. Detail thus built up in the fingers of the

modeller could not be reproduced by casting in any material, nor by any mechanical process whatsoever. In Great Britain the art of stucco-working died out just before the introduction of the "compo" decoration by the Brothers Adam, and during the last eighty years its place has been taken chiefly by the mechanical reproduction, in fibrous plaster cast from jelly moulds, of clay-modelled decoration based largely on the lines of the "stucco" work which was carried out under Inigo Jones, Wren, and others; and the result, in comparison, is little short of a dull parody of this really beautiful old work. The jelly process is wrong in principle. However good the original clay model may be, it cannot be modelled like the stucco stuff, and in the manifold process of reproduction it loses any degree of definition, thinness, crispness, and depth of undercutting that the original may have possessed.

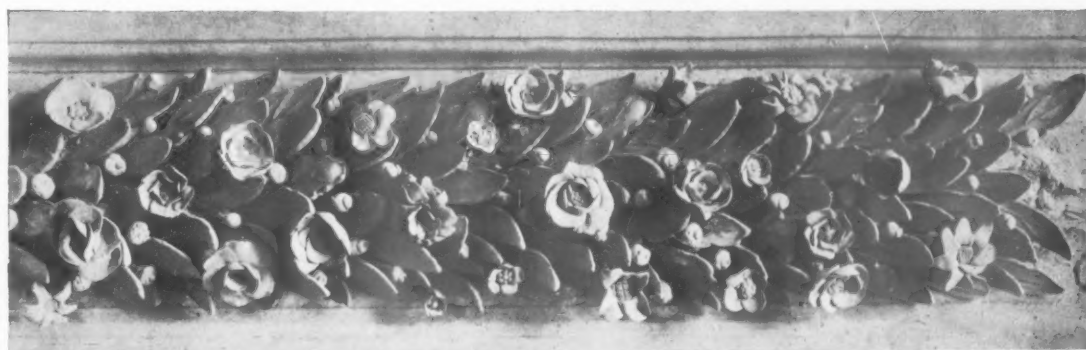
By Mr. Bankart's discovery, however, old stucco-duro is again available. With this material several large ceilings are now being worked in exactly the same way as the famous ceilings above referred to. Side by side we show some old and modern detail, from which it will be seen that there is no doubt about the success of the latter.



NEW WORK: A CORNER-PIECE BY GEORGE P. BANKART
IN PROCESS OF MODELLING



OLD WORK: DETAIL OF DRAWING-ROOM CEILING
AT MELTON CONSTABLE, NORFOLK (1687)



NEW WORK: ENRICHMENT IN STUCCO-DURO BY GEORGE P. BANKART

PROPORTION AND RHYTHM IN TOWN PLANNING

BY DR. A. E. BRINCKMANN



IN connection with town planning it is necessary that both architect and public should cease to regard a single building as a complete work. Each building has a duty towards its surroundings and towards the whole town. It is not enough that a building is effective in itself; the point is—how much does it contribute to the general architectural scheme? It is a mistake to suppose that the best architecture would appear to advantage

(as, for instance, the need of space for the laying-out of a churchyard), but certainly also from a regard for the formation of the market-place with gabled sides, great buildings of brick with massive towers were placed well behind, so as not unduly to oppress the market-place, and also with the object of enhancing the effect by grouping of varying heights. As an example we may take the market-place of Greifswald (Fig. 2), where the scale is given by the houses in front of the church.

There is the closest connection in architectural style between house building and town planning. The whole appearance of a town corresponds to the style of the individual houses which compose it. And as the general style is constantly undergoing changes, it follows that the appearance of an old town, though beautiful, cannot be taken as a model: it also follows that our town plans will only take a settled form when the architecture of single buildings becomes settled. Until then all town planning is merely an intellectual striving after useful results without true architectural inspiration.

It is interesting to note that in former days similar designs were used to give the same effect both in single buildings and large groups. The Castle of Nymphenburg, near Munich, shows in front a wide circular forecourt, shut in by a number of pavilions connected by a wall. At right angles to the main building, and at some little distance from it, are the administrative blocks, joined to the main building by two-storeyed corridors bridges, the arches of which give entrance to the castle garden (Fig. 3). These corridors inserted in the façade help to emphasise the main building and ensure its predominance. Another arrangement is seen in the market-place of Ludwigsburg (Fig. 4), which is surrounded by two-



FIG. 1.—THE MARKET-PLACE, DONAUWÖRTH

in any place. The thing to be considered is—does it harmonise with the street or square in which it is placed, to the gain both of itself and of the surroundings? In the case of the parish church of Donauwörth (Fig. 1) the tower is the only lofty building open to the view from the long, steep, main street that runs up to the wide market-place. It seems to gather up in its height all the varying detail of the street below, and, by its peaceful contrast, gives harmony to the whole picture. A second tower would spoil the effect and upset the balance instead of strengthening it.

The regular way in which the town areas in the provinces east of the Elbe are laid out shows that the idea of town planning existed in Gothic days. The town area is here divided by streets crossing at right angles, forming a square market-place in the centre. Partly for practical reasons



FIG. 2.—THE MARKET-PLACE, GREIFSWALD



FIG. 4.—THE MARKET-PLACE, LUDWIGSBURG
NEAR STUTTGART

storeyed houses arcaded on the ground floor. This arrangement magnifies the breadth of the houses and gives them a low appearance, thus increasing the effect of the two church fronts, to which they stand out in striking contrast. The apparent scale is quite different from the real, as a comparison with the plan (Fig. 5) will show.

An essential part of architectural composition consists in striving after refinement in the relations of the individual forms which constitute the whole; these in turn lead from one part to another, presenting finally an effect built up of the different units. In this way a distinct rhythm is imparted. To give form and individuality to streets and squares, to show that they are definitely bounded spaces instead of accidental gaps between blocks of buildings, to set them out in relation of size to each other, and, further, to add a certain rhythm in the expression of their functions, is a task of vital importance in town planning. There will always be many who prefer irregular antiquated towns to those built on a definite plan, just as there will always be many who lack courage for a great venture. To them the old ways are best; but we do not go to them for a final judgment between formal and irregular planning.

As a simple and at the same time beautiful example of space-rhythm, no finer example could be found than the court of Ludwigsburg Castle near Stuttgart (Fig. 6), which was begun by Johann F. Retti in 1704, and completed by Giuseppe Frisoni. Built in as it is on all sides, the wonderful harmony between the side façades and the centre block is altogether in keeping with the character of the closed-in

court. The façades not only interpret the different buildings—a practice slowly falling into disuse since the Italian Renaissance; they stand also in closest relation to the courtyard, varying its outline no fewer than three times, as the buildings, instead of lying side by side, recede in three different parts. It is only by such harmony of surrounding buildings that rhythm can be given to an enclosed space. The same outlines with uni-

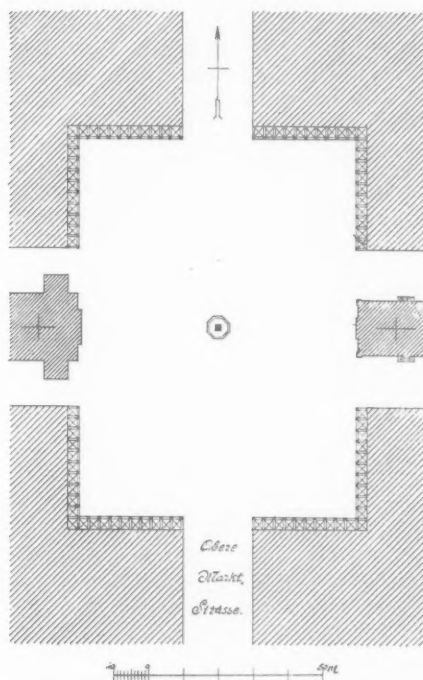


FIG. 5.—THE MARKET-PLACE, LUDWIGSBURG

form façades would take all the life out of the picture, while disconnected façades would equally destroy the effect.

Rhythm depends on the proper dividing up of the component parts. A street may produce the impression of space by uniformity, but only by



FIG. 3.—THE CASTLE, NYMPHENBURG, NEAR MUNICH

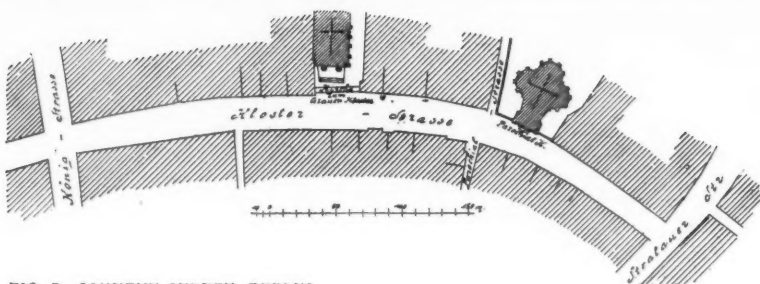


FIG. 7.—CONVENT STREET, BERLIN

emphasising certain parts does it become rhythmical. The Convent Street in Berlin (Fig. 7) furnishes an example. It follows the curve of the former ramparts, and the parochial church, built about 1700, is so placed on the bend of this fine street of varying width as to divide it into two sections. In this way the simplest arrangement of rhythmical division is obtained. The plan of Erlangen (Fig. 8) shows a varying series of street sections and squares, whose axes are marked by monumental buildings, in which connection it should be noted that if the architect wants to give this rhythm of plan to an open space, it is of the greatest importance that the street corners are emphasised by "Richthäuser" (especially large

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three-storeyed buildings instead of the usual two-storeyed ones in Erlangen). These "Richthäuser" act both to divide and connect; dividing in so far as their great mass marks the separation of streets and square, linking inasmuch as their two similar façades form a good transition between these places. The direction of the different axes greatly helps the effect—to the trained architectural eye, at any rate—although the appearance in general is extremely plain, only very moderate means having been at the town's disposal.

Another example is furnished by the colonnaded square of the Stadtschloss at Potsdam, Berlin (Figs. 9, 10, 11), which extends through beautiful pleasure gardens adorned with marble statuary towards the River Havel. The most imposing building in the first part of the street is the Garrison Church of Gerlach. Its tower rises to a height of 300 ft., and projects into the thoroughfare. In thus checking the continuity of the street it forms the first space-division. A little farther on the street rises slightly as a bridge over the canal. The street which opens before the canal to the



FIG. 6.—THE CASTLE COURTYARD, LUDWIGSBURG

right now opens also to the left, and the open space is occupied by the large Military Orphanage, by Gontard. The obelisks of the Neustädter Gate, crowned by bronze eagles, close the view and, even as seen from afar, give a fine termination to the street.

In remodelling the new city of Dresden (Fig. 12) the Hauptstrasse and Königstrasse were taken as the basis. The Hauptstrasse leads to the Market-place, where it faces a monumental isolated building on the farther side—the present War Office—while the Augustus Bridge leads away from one side. The street needs this huge building to give it a finish, otherwise the dimensions of the Market-place would be lost against the width of 55 metres. To get a proper impression of the whole we must imagine the surrounding buildings of similar height and façade. This harmonious arrangement of streets and Market-place does not form a series of varying masses one



FIG. 8.—PLAN OF ERLANGEN

behind the other, but a rhythmical grouping around a central space. In this respect town planning attempted a new and quite important



FIG. 9.—BROAD STREET, POTSDAM :
THE GARRISON CHURCH

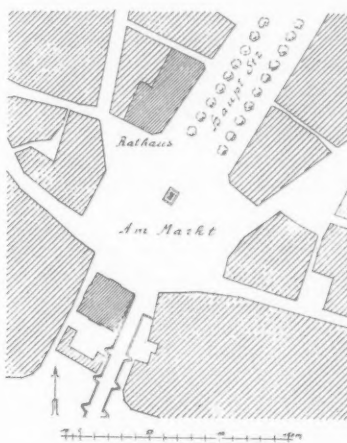


FIG. 12.—THE MARKET-PLACE OF
THE NEW CITY, DRESDEN

task, without, however, reaching a completely successful solution. That such problems exist and offer a wealth of possibilities is hardly suspected in these days.

[The foregoing is an adaptation, made by arrangement with the author, from the first two chapters of a book by Dr. Brinckmann entitled "German Town Planning of the Past," which has recently been published by H. Keller of Frankfort.]



FIG. 10.—BROAD STREET, POTSDAM: THE BRIDGE OVER THE CANAL

ENGLISH CHURCHES AND CATHEDRALS

NOBODY can complain of a lack of books dealing with our cathedrals and churches, and to the already swollen library of such volumes must now be added the three under notice. The one by Mr. Sidney Heath is a new and remodelled edition of one of the "Homeland Handbooks" which has been out of print for some time. It ranges over the whole history of English church building, and is a compact little half-crown volume that can be slipped in the pocket when on a tour. There is nothing remarkable about the letterpress, but the record is set down in readable fashion, and the pages are enlivened by a large number of photographic reproductions and a series of details drawn by Mr. J. R. Leathart.

Mr. Hurst Seager's is another small book, dealing with Canterbury only. It is, we gather from the preface, the first of a "Tourist Cathedral Series," in which attention is restricted to the

architectural facts capable of being learnt or impressed from the cathedrals themselves. The author's view is, that it is much better to be taken straight up to a thing, in order that we may study it before our eyes, than to pore over written descriptions of it; which is a method well enough in its way, though it has the defect of taking us back to the sing-song guide of sad experience—"on the right we have the grand old abbey, on the left the towering castle wall," etc. Still, the features of Canterbury are very clearly pointed out in this little volume, which is therefore to be commended. It, too, is illustrated by small photographic

reproductions, but as the author very rightly considers such illustrations to be inadequate, there will be issued, in a separate cover, a series of stereoscopic illustrations that will give "an accurate impression" of the beauties and special characteristics of our cathedrals.

The aim of the third book before us is not to describe the cathedrals but to illustrate them, and so we have the pleasure of looking through a hundred good reproductions of excellent photographs, making an attractive book well worth the half-crown charged for it.

"Our Homeland Churches and How to Study Them." By Sidney Heath. London: The Homeland Association, Ltd., 15 Bedford Street, W.C. Price 2s. 6d. net. 5½ in. by 4½ in.

"Canterbury Cathedral." By S. Hurst Seager, F.R.I.B.A. London: Simpkin, Marshall & Co., Ltd., 4 Stationers' Hall Court, E.C. Price 1s. 6d. 6½ in. by 4½ in.

"British Cathedrals": 100 illustrations, with an introduction by J. Warrack. Edinburgh: Otto Schulze & Co., 20 South Frederick Street. Price 2s. 6d. 10½ in. by 7½ in.

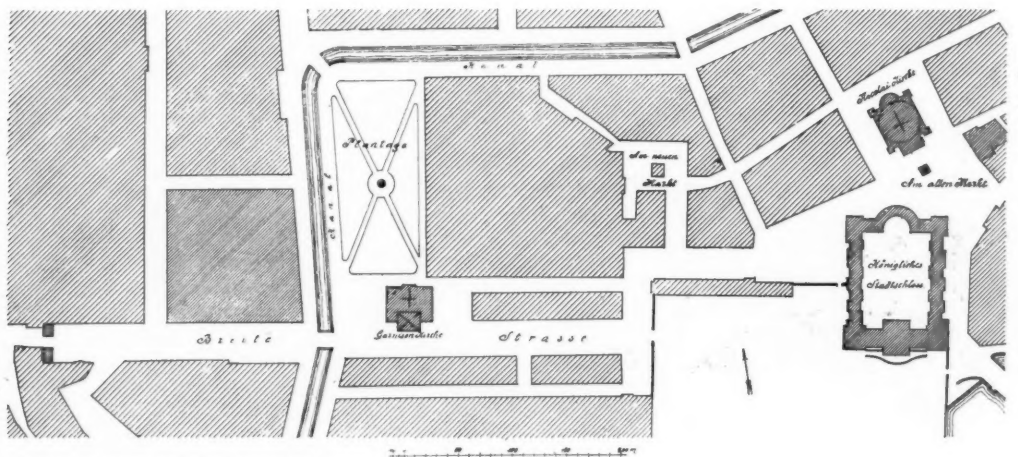


FIG. 11.—BROAD STREET, POTSDAM